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SOME MODERN EXTENSIONS OF BEAUMONT'S STUDIES ON ALEXIS ST. MARTIN*

I. THIRST AND HUNGER

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In 1929 the thirteenth International Congress of Physiology was held in Boston. The hosts on that occasion were the members of the Federation of American Societies for Experimental Biology, including physiologists, biochemists, pharmacologists and experimental pathologists; and the members of the Congress who came from abroad included eminent investigators from many countries in all parts of the world. When a Congress meets in any country it is customary for the members from that country to select one of their countrymen, who has been an outstanding contributor to the physiological aspects of science, to be commemorated in a medal. In anticipation of the Boston meeting various non-living Americans who had contributed to physiology were considered for that honor. After discussing all the men who were proposed, the Committee having the matter in charge finally selected Dr. William

*This is the first of the series of Beaumont lectures delivered before the Wayne County Medical Society, January 30, 1933. See editorial page 189.

Beaumont, who, in Osler's phrase, was "the pioneer American physiologist." This selection met universal approval. The reason for unanimity of the choice was, I believe, a basic feeling that Dr. Beaumont singularly typified American character. By the accident which opened the stomach of Alexis St. Martin, Beaumont was presented with an unusual opportunity to study the processes of gastric digestion. To be sure, such accidents had occurred in the past but no one had seized the chance thus offered to carry on systematic studies. In Beaumont's case, however, the occasion and the investigator met, and the occasion was seized with intelligence and utilized with the utmost interest and persistence. Working in a backwoods army post, under the most unfavorable conditions, without laboratory aids, with no journals or other literature to consult, with no associates to encourage him and to help him create an atmosphere for research, Beaumont for long periods conducted careful studies on his patient. They exemplified admirable independence and resourcefulness. He recorded his observations in the common language, transparent in its devotion to telling the truth as he saw it. Again and again he had to persuade and cajole the "fistulous Alexis" in order to be able to continue the investigations. Just one hundred years ago, in 1833, he published his classical book entitled, "Experiments and Observations on the Gastric Juice and the Physiology of Digestion." That was not, however, the end of his efforts. Twenty years later, in 1853, he tried again, after many futile attempts, to obtain the cooperation of St. Martin. In October of that year, he wrote to his cousin with characteristic modesty, "I must retrieve my past ignorance, imbecility and professional remissness of a quarter of a century, or more, by double diligence, intense study and untiring application of soul and body to the subject before I die." It was the seizing of the rare chance, the independence of judgment, the ready use of simple methods, the persistent and scrupulous care evident in the studies which Alexis St. Martin made possible, the repeated conquest of difficulties in spite of discouragements, and the clear and direct reporting of observed facts in a field where Beaumont was a pioneer, that made him the investigator whom American physiologists admired and whom they with pride memorialized in a medal.

The selection of Beaumont as a typical American investigator was one which foreign guests at the International Congress could appreciate. Beaumont's studies were known throughout the world. The method which he by chance made use of was, within a few years after his book appeared, applied in studies of lower animals by the great French physiologist, Claude Bernard, and later by many others. Much later the method was used also by the renowned Russian physiologist, Pavlov, in his classical studies of the digestive process, for which, in 1904, he received the Nobel Prize. The backwoods physiologist of one hundred years ago thus received high honor, much greater honor than he could ever have anticipated, from physiological investigators at one of their great triennial meetings.

When I was asked to give the Beaumont Lectures before the Wayne County Medical Society on this 100th anniversary of the publication of Beaumont's classic, I welcomed the invitation with pleasure and interest. The reasons for that satisfaction are two. It happens that my own life and my early interests in research were in a rather special way related to the life and labors of Dr. Beaumont himself. For about two years he was stationed at Fort Crawford, an outpost set up against the Indians at Prairie du Chien, Wisconsin—then in Michigan Territory. Some of his most important studies on St. Martin were carried on there during the years 1829-31. About forty years later my father and mother were residents of Prairie du Chien, and it happened that I was then born in that small settlement where Beaumont had pursued his researches on gastric digestion. Years afterwards I, too, undertook an investigation of digestive functions. In 1896, when I was a first-year medical student, Dr. Henry P. Bowditch, Professor of Physiology at the Harvard Medical School, suggested that we use the newly developed X-rays to study the phenomena of swallowing. I accepted the suggestion, and in the autumn of that year began observations on the movement of food through the esophagus as revealed by the then very mysterious and miraculous rays. During the holiday week the last of December, 1896, we demonstrated the movement of material through the neck of a goose. The bird was shut tightly in a box through the top of which the neck protruded. A high cardboard col-

lar fixed above the box to hold the neck straight gave the goose a most absurd and pompous air. Such were the beginnings of the use of X-rays in tracing the processes of digestion. Soon we were making use of subnitrate of bismuth as an opaque powder mixed with the food to cause it to cast a shadow on a fluorescent screen. The food that was swallowed by dogs and cats, whose movements of deglutition were being examined, gathered in their stomachs. This accumulation naturally aroused interest in what could be seen of gastric peristalsis and the emptying of the stomach into the intestine. The passage of food into the intestine led to scrutiny of the processes taking place there. Thus, step by step, the progress of food through the alimentary tract was followed. Subsequently, observations were made on the rate of passage of different food stuffs through different parts of the tract, the effects of the temperature of the food on its treatment, the relation of an acid or an alkaline reaction to its discharge from the stomach, the influence of dilution, and many other conditions which need not now be mentioned. Suffice it to say that the new method has given the opportunity, as Haggard has remarked, for every physician to be a William Beaumont and his patient an Alexis St. Martin, because now it is possible by means of the roentgen rays, as everyone is aware, to examine readily in man the activities of the gastric wall, the changing contour as disease may influence it, and the effects on digestion of many factors that were first observed in lower animals.

The work on the physiology of the gastro-intestinal tract which I had the privilege of beginning thirty-six years ago was summarized in a book published about twenty-one years ago under the title, "The Mechanical Factors of Digestion." Since that time I have not been engaged directly in researches on alimentary functions. Other interests, however, that have occupied my attention during the past twenty-one years, have been the outgrowth of the earlier studies, and they have significant bearings on the activities of the digestive organs. It has seemed to me, therefore, quite in consonance with the spirit of this occasion to consider some of these more recent interests in relation to the observations which Beaumont recorded. Among these later interests are those concerned with the nature of thirst and of hunger, the influence of general bodily conditions on digestion, and the effects of emotional excitement in the organism.

Although the record which Beaumont left us is in the main a direct descriptive account of observations which he made on St. Martin, he occasionally summarized his experience and drew conclusions therefrom. Furthermore, he expressed certain opinions regarding the nature of processes which he could not fully determine by observational methods. Among the opinions were those included in a brief chapter entitled "Of Hunger and Thirst." I propose that we examine today Beaumont's views on these subjects and some of the more recent developments which modify those views.

First let us take up thirst. In a brief consideration of thirst Beaumont quotes Magendie, then probably the foremost physiologist in the world, as saying, "Thirst is an internal sensation, an instinctive sentiment"; "the result of organization and does not admit of any explanation." With characteristic independence Beaumont utterly rejected the limitation which Magendie had laid down. He said, "Thirst is no more an 'instinctive sentiment' than any other sensation of the economy; to say that it is the 'result of organization' gives no explanation, amounts to nothing, and is certainly, to say the least, a very unsatisfactory way of disposing of the question." Beaumont declared that thirst is a sensation arising from the mouth and fauces, a feeling of dryness due to evaporation of moisture from the surfaces of those regions because the passage of the respired air took up the moisture at a rate faster than it could be supplied.

He further suggested that the failure of a secretion adequate for keeping the surfaces of the pharynx moist was due to a viscid state of the blood resulting from an inadequate water supply. Modern research has not supported this explanation of the nature of thirst, for careful studies of the blood have shown that even after several days of lack of water the physical state of the blood is altered to only a minor degree.

Although the theory of thirst as a general sensation was supported by as great a physiologist as Claude Bernard, recent evidence, I think, definitely confirms Beaumont's view that it has a local source in the mouth and pharynx. The main fea-

tures of this evidence are as follows: Persons suffering from severe thirst because of great losses of water through the kidneys, as in diabetes insipidus, are relieved when the sensitiveness of the nerve endings at the back of the mouth is destroyed by painting the region with cocaine. Moreover, sipping a small amount of water and temporarily moving it about in the mouth will stop the sensation. Also, holding in the mouth a substance which causes a secretion of saliva —a bit of lemon, for instance—will lessen thirst. Not one of these procedures supplies water to the body and yet the distress is mitigated. Since the thickening of the blood cannot explain the local dryness, as Beaumont suggested, some other explanation must be sought which, when the body requires water, would cause the mouth to become dry. This arrangement might reasonably be found only in animals which are continuously and repeatedly losing water, and which, therefore, must have repeated renewal of the water supply in order to maintain a normal condition.

Clues which led to the explanation of thirst were found in comparing the characteristics of water-inhabiting vertebrates with those that are strictly inhabitants of the air. Fish, for example, live in water, and, having a constant stream of water moving through the mouth, they probably never suffer from thirst. The conditions are quite different in the air-inhabiting forms. There is no longer a water current to keep the mouth moist. Instead, there has been added to the structures of the head a nasal chamber through which an air current passes. This current crosses the pharynx to reach the windpipe or trachea. The lining of the nasal chamber and the trachea is well provided with cells which secrete a mucous fluid. On the other hand, the lining of the back of the mouth and the pharynx consists of flattened epithelium having few secreting cells. The air which passes to and fro crosses this ancient water course and therefore tends to dry the region. Prolonged speaking, singing or smoking, which deprives the pharynx of the advantage of previously moistened air, because the air is drawn mainly through the mouth and not through the nose, is especially favorable to drying the mucous membrane at the crossing. The sensation of dryness and stickiness in this area, as Beaumont noted, is recognized as thirst.

Why, then, does not the mucous membrane at the back of the mouth always feel dry and sticky? And why does it feel so, particularly, when the body is in need of water? Again, comparison of water-inhabiting animals with air-inhabiting animals offers a suggestive clue. The vertebrates which live in water do not possess buccal glands, whereas those which live in air have such glands, and they are newly developed features associated with the new type of environment. In the higher air-inhabiting forms the buccal glands have become evolved into the well-known salivary glands. Note especially the significant fact that the saliva which they produce has a water content varying between 97 and 99 per cent. Normally saliva assures a moist lining of the buccal cavity. The theory which these glands suggested was that when water is needed in the body the salivary glands are unfavorably affected by the deficient general water supply. If they do not have water to utilize for secretion they are unable to perform their function of keeping the mouth and pharynx moist. This region, therefore, becomes dry, and thus the sensation of thirst arises. This theory, which I put forth about fifteen years ago, has now a considerable body of evidence to support it. In the main the evidence is derived from observations on a lessened salivary flow and the appearance of thirst when the water content of the body is reduced, or on the appearance of thirst if the mouth becomes dry, even though the body is not dehydrated. Let us consider briefly these observations.

In one of the first experiments I found that chewing of a tasteless gum for five minutes would result repeatedly in a fairly uniform amount of saliva. If no water is taken for many hours, however, there is after a time a gradual diminution in the amount of saliva produced in consequence of the standard period of mastication. In my experience, deprivation of water for twenty hours resulted in the reduction of the output of saliva by approximately 50 per cent. This observation has recently been confirmed by Winsor, who recorded the reduction of the salivary output to one-sixth its normal amount seventy hours after his last drink. My colleague, Dr. Gregersen, has likewise confirmed the observation. A few minutes after a drink of water the salivary output was restored in all cases nearly to normal. Associated with the

diminished secretion of saliva there was a definite sensation of thirst—a sensation which disappeared as soon as the supply of saliva was restored. This coincident association of bodily need for water, diminished flow of saliva, and the sensation of thirst, strongly supports the view that the deficient functioning of the salivary glands signals the bodily need by causing the unpleasant sensation.

Again, it was found that the output of saliva can be greatly reduced by abundant sweating. When conditions are established to produce that effect, the standard mastication results in a greatly reduced output of saliva. This is associated with a noteworthy dryness of the mouth and an unpleasant thirstiness which can be rapidly abolished by the drinking of water.

Furthermore, the subcutaneous injection of the drug atropine caused, in my experience, a reduction of the salivary output, in consequence of mastication for the standard period, falling to approximately *one-fourteenth* of its former amount. There was, of course, no noteworthy loss of water from the body. Nevertheless, all of the feelings of ordinary thirst were present.

Quite significant is the evidence that there is a well-established reflex secretion of saliva after the mouth becomes slightly dry. One need only breathe through the mouth for about five minutes to demonstrate that first the moving air gradually dries the buccal surface. As the surface becomes dry, saliva is poured out in an amount which may be greater than that obtained by chewing. The presence of this reflex indicates that salivary glands have as one of their special functions the moistening of the mouth.

We are all probably acquainted, from personal experience, with another important fact,—the appearance of thirst as a consequence of fright and the attendant checking of salivary secretion. There are interesting records of persons who, confronted by terrifying situations, have felt intensely the sensation of thirst. Indeed, this fact was used in the old ordeal of rice in which chewing dry rice and later putting it forth from the mouth were required in order to determine the guilty party in a group of suspects. It was assumed that the one who had most reason to be fearful of the result would be less able to muster the saliva necessary to moisten the rice. Under these circumstances, the intense and distressing sensation of thirst is not associated with any real lack of fluid in the body but results from the local condition in the mouth.

In criticism of the theory I am expounding, Montgomery has recently reported that after removal of the salivary glands from dogs the animals, fed moist food, did not take any more water than before the operation. Gregersen and I have shown, however, that such is not the case if the animals are exposed to conditions which tend to dry the buccal mucous membrane. If dogs deprived of the function of their salivary glands are placed in a warm room where they exhibit panting, the water intake may be increased much more than 100 per cent over their normal intake. Under conditions which make the mouth dry, therefore, a deficient salivary flow evidently causes thirst and an increased water intake, even in the absence of actual bodily dehydration.

Within the last few months Gregersen has shown that, when the time of drinking and the amount of water drunk are registered graphically, the water intake of dogs occurs almost solely within the first few hours after feeding, regardless of the time when food is given. If no food is given for twenty-four hours the usual amount that is drunk is reduced to one-fourth the normal or less. Furthermore, if the giving of water is delayed for some time after feeding, the twenty-four hour intake is ordinarily much less than when water is given freely through the period immediately after the feeding. These interesting observations are reasonably explained by the loss of water from the body into the contents of the digestive canal by action of the digestive glands. As Beaumont showed, there is a large secretion of gastric juice into the stomach contents. To this must be added the water which acts as a vehicle for the ferments from the pancreas, also the water in the bile and that in the *succus entericus*. Of course some of this water goes back into the body as food is being absorbed. As the food passes through the alimentary tract, however, it is abundantly mixed with fluid, which renders the passage easy and which serves as a medium in which the chemical changes of digestion can take place. All the water that is contributed to this mixture is as if actualy lost to the organism. In unpublished studies Gregersen has shown that although there is no considerable thickening of the blood, the blood volume is very

much reduced by the water losses which occur because of the digestive secretions. Under these circumstances, again, the salivary glands are deprived of the main constituent of their product and therefore they are unable to keep satisfactorily moist the mucous membranes. Thus is explained the behavior of the dogs in the few hours after eating when they drink abundantly. Thus is explained also their failure to drink if they have not been fed. And thus, also, is explained their failure to drink abundantly if there is sufficient delay in giving them water after a meal, for the digestive juices which have been poured out have then been restored to the body again, and the need for water is no longer present.

Naturally, in our ordinary eating habits we take water with food as we eat. This water is soon absorbed after its passage through the stomach and serves to compensate for the loss of water from the body in the digestive secretions which are poured out as digestion continues after the meal is over. Ordinarily, therefore, we do not experience the postprandial thirst which was manifested by Gregersen's dogs under experimental conditions. Careful observation reveals that usually after a large meal there is a relatively small discharge of water from the body through the kidneys. The reason for that fact becomes clear on the basis of Gregersen's observations,—the body is using water in the digestive process. Only when that process has been completed, and the valuable materials of the food have been absorbed, and the waste has been carried to the colon, is the water restored to the body in amounts which make an excess. Under these circumstances, the organism gets rid of the excess by kidney action.

The evidence which we have just surveyed offers an alternative explanation of the experiments which have been adduced to support the theory that thirst is a general sensation. These experiments in the main consisted of the introduction of water under the skin or into a blood vessel or by way of the intestines (i.e., not through the mouth), and then observing that the sensation of thirst and the desire for taking water disappeared. Obviously, however, just such procedures provide the water supply which allows the salivary glands to operate. The mouth which has become dry because of their failure to operate properly is now moistened again and the sensation of thirst naturally disappears. Its disappearance does not result directly from a satisfaction of a general bodily need but indirectly from the moistening of the mucous membrane of the mouth and pharynx.

We see, therefore, that although Beaumont was right in attributing thirst to a local condition in the mouth and although his bold challenge to the eminent physiologist, Magendie, who had declared that thirst "does not admit of any explanation," was wholly pertinent, we cannot give the same explanation of the phenomenon of thirst which he gave. Instead of assuming an increased viscosity of the blood as a consequence of water lack, we find a reduced blood volume and an attendant reduction of the flow of saliva. That in turn fails to keep moist the mouth and pharynx, and thirst results. Thus the salivary glands act as sentinels to warn against bodily dehydration.

Now let us turn to a consideration of hunger. In the section of his book, "Of Hunger and Thirst," already referred to, Beaumont argued in a very able and self-reliant manner regarding hunger as a sensation. He declared, with reference to the statement that hunger is produced by action of the nervous system and has no other seat than that system, "I cannot perceive that such explanations bring the mind to any satisfactory understanding of the subject. In such a broad proposition it is difficult to ascertain the exact meaning. If the design is to convey the impression that hunger has no 'local habitation'; that it is an impression affecting all the nerves of the system in the same manner, then the sensation would be as likely to be referred to one organ as another." He furthermore argued against certain explanations of the local source of the hunger pang. It was not due to friction of the internal coats of the stomach for three different reasons which he brought out, nor due to irritation of a quantity of gastric juice in the stomach, nor to the "energetic state of the gastric nerves" as had been suggested, nor to the "foresight of the vital principle," which phrase Beaumont declared "means anything, everything or nothing, according to the construction which each one may put upon it." His bold and downright characterization of these views gives relish even as one reads his words today. The explanations, he declared, "are mere sounds and words which convey a tacit

acknowledgment of their author's ignorance."

Beaumont's own view of hunger was that it was "produced by a distension of the gastric vessels, or that apparatus, whether vascular or glandular, which secretes the gastric juice." He reasoned that the sensation must have its source in the stomach itself and that the sensation would vary according to different degrees of supposed distension —the greater the distension the more acute the pang. This argument was based largely on the analogy of pain arising from distension of blood vessels in acute inflammation. He cited in support of the argument that the application of food to the internal coat of the stomach results in an immediate throwing out of a quantity of fluid which mixes with the food. Associated with this discharge of secretion was quiescence and relief from the unpleasant hunger pang. He assumed that during the period when the stomach had no food within it, and when therefore no secretion was occurring, large amounts of the gastric juice must be contained in the appropriate vessels ready to be poured forth.

The feature of hunger which, it seems to me, Beaumont overlooked was its intermittent or recurrent character. Careful observation reveals that hunger occurs in periods; that for a moment it may be present, then it is absent, and then a moment later it is present again. Or, it may work up to a climax of disagreeable feeling, and then may totally disappear, only to recur once more in a gradually developing pang. Such observations on hunger I had made as early as 1905. Interestingly enough the first intimation that hunger is due to contractions of the stomach came during a research on the auscultation of abdominal sounds. The disappearance of the recurrent hunger pangs was commonly associated with a rather loud gurgling noise as heard through the stethoscope. Apparently Beaumont made similar observations. In experiment 65 in his third series, he reports that the introduction of 3.5 drachms of lean, boiled beef through St. Martin's fistula caused an immediate disappearance of the sensation of hunger, and therewith "stopped the borborygmus, or croaking noise, caused by the motion of air in the stomach and intestines peculiar to him since the wound, and almost always observed when the stomach is empty." Beaumont drew the conclusion that this experiment proves that the sense of hunger resides in the stomach. He did not go further, however, and infer that the noise which was heard could only be due to a vibration of air forced by muscular contraction through a narrow orifice.

The time and opportunity for securing evidence as to the cause of the periodic recurrences of the hunger pangs, which I had noted in 1905, did not arise until about 1910. At that time one of my medical students, Arthur Washburn, expressed a desire to carry on investigations in the laboratory, and since he had the unusual ability of regurgitating his gastric contents at will, I proposed to him that we undertake a study of the nature of hunger, and suggested that he become accustomed to having a tube in his esophagus. He took this advice and for days serenely carried on his work in the laboratory with a tube reaching down to his stomach and prevented from going further by a firm grip on its upper end in his clenched teeth. When he had become thoroughly accustomed to this strange condition, we fastened a balloon on the end of the tube and introduced the balloon into the stomach. Then Mr. Washburn, who is now a practicing physician in New York City, would come to the laboratory without breakfast and sit with his back to a recording apparatus ready to press a key whenever he felt hungry. The interesting fact soon developed that quite apart from any contractions of the abdominal wall there were powerful contractions of the stomach which lasted approximately a half-minute and recurred after an inactive interval of about a minute, and that the sensation of hunger was associated with the acme of these contractions. Thus, evidence was adduced that the hunger pangs themselves were due to a cramp-like tightening of the smooth muscle of the gastric wall.

The evidence for associating hunger pangs with gastric contractions was first reported in a lecture before the Harvey Society in New York City in December, 1911. The full report was published in March, 1912. At about that time there appeared in the laboratory of Professor A. J. Carlson, the Chicago physiologist, a real second Alexis St. Martin, a man with a fistula through which it was possible to make studies of the gastric digestive processes quite as Beaumont had done so many years before. This favorable accident made it possible for Carlson to work on the phenomena of hun-

ger in a highly convenient manner. Since at that time I was much interested in the effects of emotions on the body, I turned to that field, and left further investigations of the nature of hunger wholly to Carlson and his students.

In a series of interesting researches on human beings, some of whom, like Washburn, recorded gastric contractions through a tube in the esophagus, and also in studies on various kinds of lower animals, Carlson and his collaborators—prominent among whom is Professor T. L. Patterson of Detroit—not only confirmed the observations which we had made but have brought out many new aspects of the hunger pangs and the relation of gastric contractions to them. For example, we had observed only the separate rhythmic recurrences of the powerful activity of the gastric wall. They were able to prove that in addition the phenomenon of hunger usually begins with occasional weak contractions, that these become gradually more vigorous and appear at shorter intervals until a supreme degree of activity is reached which may culminate in an actual spasm of the smooth muscle. Both the single contraction and the spasm are associated with the typical unpleasant ache, or pang, or gnawing sensation which has long been recognized as the experience of hunger. After the acme of activity has been reached, the stomach usually relaxes and remains inactive for a period, whereupon it starts again with occasional weak contractions, and the cycle of increasing activity followed by quiescence is again repeated. Carlson's second Alexis St. Martin reported that distending the stomach by the balloon or rubbing the mucous lining of the stomach with a smooth object did not cause the sensation of hunger unless these procedures caused contractions. It is definitely the contraction of the gastric muscle, therefore, that brings about the hunger pang.

By simultaneous observations on the pressure changes in the stomach (as recorded from an intragastric balloon during the experience of hunger) and on the gastric contractions (as examined by means of the roentgen rays) Rogers and Martin have found that there are two types of activity in the stomach during the hunger pang. At the height of the pang the lower portion of the stomach may be so strongly contracted that the cavity in that region is completely obliterated. In addition, there may be unusually powerful gastric peristalsis at such a rate that the second wave appears before the first one has gone.

Carlson has studied also with care the conditions which might influence the hunger contractions. For example, sleep does not interfere with them, although they may interfere with sleep and thereby produce restlessness. The contractions are stopped by chewing, and they may be temporarily inhibited by swallowing, a fact which I had noted in 1905. As I shall explain in my third lecture, strong emotional states abolish all digestive activities in the alimentary tract. It is interesting to note that such states likewise abolish the gastric contractions associated with hunger. They are weakened and may be completely checked by smoking; and apparently in this respect the efficacy depends predominantly upon the "strength" of the tobacco. The direct introduction of alcoholic beverages—undiluted beer and wines and 10 per cent alcohol—into the stomach through the gastric fistula causes cessation of the hunger contractions, and also lessening of the tonus of the empty stomach. Very vigorous muscular exercise also inhibits the periodic waves of hunger, but after the inhibition they are likely to occur with greater intensity than before. We have all heard of the advice to tighten the belt, when hunger pangs are intense, in order to abolish them. Tightening of the belt does, indeed, lead to a stoppage of the hunger contractions if they are weak or of moderate strength. The stoppage then may be partial or complete but it lasts only a short time, from 5 to 15 minutes, whereupon they reappear despite continued pressure of the belt.

In almost every audience there are always a few persons who will testify that they have never experienced the pangs of hunger. It is known, furthermore, that although the hunger pangs cease to be disturbing after the first few days of fasting, the hunger contractions still continue. These two facts appear to minimize the importance of hunger contractions as a source of hunger pangs. They are not, however, cogent arguments for the conclusion that the contractions are not the source of the pangs, because many circumstances may prevent stimuli from having their usual effect. A ticking clock, for example, may not produce the sensation of ticking because other stimuli are simultaneously affecting the nervous

system, or because, for instance, the nervous system may be dulled by sleep. That the ticking is not heard at times does not prove that it does not produce the sensation when it is heard. Recently Christensen has reported an inability to find a relation between the presence or strength of gastric contractions and the presence or intensity of hunger sensation. He did indeed find that in conditions of gastric disease typical "hunger pains" were associated with vigorous contractions of the empty or nearly empty stomach. But even under these conditions strong contractions were recorded that were not associated with hunger pangs. This, however, is negative evidence. It seems to me that it can have little force in view of the consideration that other stimuli may influence attention and thereby lessen the influence of the hunger contractions, and in view, also, of the positive testimony of numerous investigators who, since the time when Washburn and I first studied the phenomenon, have found that the pangs of hunger have their immediate source in strong contractions of the gastric musculature.

The interesting problem arises as to what induces the stomach while empty to contract with a much greater vigor than when ordinary peristalsis is coursing over the wall during the digestion of a large meal. The opinion has been expressed that the general bodily need of nutriment affects a part of the brain, that thereupon this serves as a stimulus to arouse gastric contractions, and that these then produce hunger pangs. Carlson has shown, however, that the typical contractions of the empty stomach occur when that organ is completely isolated from the brain and spinal cord, though at somewhat longer intervals than in normal animals. Again, it is known that the elective source of energy for muscular activity is carbohydrate food—glycogen, or sugar. It seemed possible that a deficiency of this energy-yielding material might be signalized by excessive shortening of the smooth muscle of the stomach. Bulatao and Carlson observed that if the sugar concentration of the blood was reduced about 25 per cent by the use of insulin, the hunger contractions became more intense—an observation which had been noted subjectively in human beings who had received an overdose of insulin. That this effect is caused by the lowering of blood sugar and not by insulin was proved by the Belgian investigators, La Barre and Destrée. They followed the gradual drop of the glycemic level after removal of the liver and found that gastric contractions began to appear when the sugar percentage reached about 75 mg. per cent (i.e., about 25 per cent below normal), and that within limits the intensity and frequency increased rapidly as the percentage fell to lower levels. Bulatao and Carlson reported that on injection of sugar into the blood stream the hunger contractions were abolished. Although this evidence is suggestive, it cannot be regarded as definite proof that the hunger contractions are due to lack of circulating sugar, for the sugar used to abolish the contractions was excessive both in amount and concentration as compared with normal blood sugar. Moreover, if a pyloric pouch or accessory stomach is made by isolating a part of that organ from its main body, the activity of the pouch is not affected by insulin nor by intravenous injections of glucose. And furthermore, Quigley and Hallaran have observed that the *spontaneous hunger contractions* of normal or vagotomized dogs are not modified by intravenously infused glucose in a wide range of doses. The discrepancy between the behavior of the gastric side-pouch and the main body of the stomach, just mentioned, points to a local automatism as the primary factor rather than to the condition of the blood, for the character of the blood flowing to the main stomach is necessarily the same. The problem as to the cause of the contractions, therefore, still remains unsettled.

Although the evidence is clear, therefore, that hunger contractions can occur in the absence of nervous government from the brain and spinal cord, there is strong testimony indicating that conditions in the brain may so affect the vagus nerve as to cause a large augmentation of the hunger contractions and consequently the hunger pangs. This evidence has come chiefly from the experiments by La Barre. He produced an experimental arrangement whereby the head of Dog B was connected with its body only by the vagus nerves; then he perfused this isolated head of Dog B with the blood of Dog A, which was allowed to run into the head and back again to the body of A. If now dog A, which is the donor, is given insulin to such a degree as to produce a definite hypoglycemia, there results as a conse-

quence of the passage of the hypoglycemic blood from A into the head of B an increase of the hunger contractions. Note again that the only connection between the head of Dog B and its stomach is through the vagus nerves. This experiment definitely shows that the impulses to increase gastric activity originated in the brain, because the blood supply to the brain was low in its sugar content and was transmitted to the stomach by way of the vagi. Further proof that the vagus nerves mediated the impulses of the brain, in these experiments, was obtained by noting that the hunger contractions ceased on the injection of atropine, the effect of which in blocking vagal impulses is well known. Similar observations have been made on human beings by Quigley, Johnson and Solomon.

Just as thirst is an indication of the need of water in the body and the capacity of the body to receive water, so hunger is a stimulus driving us to the taking of food. It is evident now that we have in our hands a means by which hunger pangs can be stimulated at will. In case of chronic inanition and absence of desire for food, it is only necessary to give a sufficient amount of insulin to reduce the blood sugar, whereupon the accessory vagus influence on gastric contractions is brought into play, and hunger pangs are produced which lead to the taking of food. It is probable also that insulin serves as a means of utilizing more effectively the food which is taken. Recent reports of the use of this strategy in persons who have poor appetites, eat little and are thin indicate that it is highly effective as a means of increasing the bodily stores.

Our behavior may be directed both by the desire of getting rid of a disturbing stimulus and by the desire to prolong or renew an agreeable stimulus. Hunger and thirst belong to the former category. Also in this category are the asphyxia of air-hunger, the discomfort of fatigue, and the unpleasantness of confinement or physical restraint. Each of these states is associated with an impulsive factor. Each one more or less vigorously spurs us on or drives us to action. Each may be so disturbing as to force us when afflicted by it to seek relief from intolerable annoyance or distress. On the other hand, experience may condition behavior by showing us that the taking of food, drink or exercise is accompanied by anticipated pleasure. It is thus that appetites are established for the repetition of these experiences; and when we are beset by an appetite we are tempted, not driven, to action—we seek satisfaction, not relief. The two motivating agencies, the pang and the pleasure, may be closely mingled. For example, when relief from the pang is found, the appetite may simultaneously be satisfied. In most of our experience as civilized human beings, appetite gives us an assurance of the supplies of food and water. If, however, the requirements of the body are not met in this mild and incidental manner, hunger and thirst arise as powerful, persistent and tormenting stimuli which imperiously demand the taking of food and drink before they will cease their goading.

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THE RELATION BETWEEN CEREBRAL DIPLEGIA AND BIRTH INJURY*

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It seems strange that there should be so much disagreement as to the etiology of a disease so common and so long known as spastic diplegia. We have not yet even agreed upon a name. It is called Little's Disease, Birth Paralysis, Spastic Paraplegia, Cerebral Diplegia, Congenital Cerebral Paralysis and Infantile Cerebral Palsy. French Neurologists would restrict the term "Little's Disease" to those cases associated with difficult birth. Years later who is to tell whether or not the birth was difficult? I have seen a child die on the tenth day after what was considered a normal, easy birth. No abnormal signs were noticed until the fifth day and the child was in a modern hospital. Autopsy revealed tentorial tears, subdural and intracerebral hemorrhages, and marked edema of the brain.

Little, in 1862, called attention to "the influence of abnormal parturition, difficult labor, premature birth and asphyxia neonatorum on the mental and physical condition of the child." He estimated that at least 75% of his cases were due to the process of labor. Since that time further proof has been given us by Schwartz, Ylppö, Jensen, Sharpe and Maclaire, Bronson Crothers, Ehrenfest and many others, that Little was correct.

The work of Philipp Schwartz of Frankfort on Main on "Diseases of the Central Nervous System Following Traumatic Birth Injury" has been the most pointed and convincing proof that spastic diplegia results from birth injury. He examined macroscopically and microscopically the brains of 300 individuals from birth to 30 years of age and described all stages of the pathological processes which result from intracranial hemorrhage. The brains of children dying soon after birth showed certain typically distributed hemorrhages both subdural and intracerebral. The evolution of these hemorrhages through stages of softening, organization, cyst formation, changes in glia cells, in ground substance and in axis cylinders was followed. In cases of spastic diplegia, lesions were found in exactly the same location and distribution as the hemorrhages in early fatal cases. Schwartz concludes that all the congenital diseases of the central nervous system need revision in the light of newer knowledge of birth injury. He feels that hydrostatic pressure tending to force all the body fluids into the region of the presenting part during uterine contractions, is one of the important factors producing rupture of small vessels within the brain itself. In vertex positions the presenting part is usually the region of the posterior fontanel, which is very close to the point of union of the longitudinal and the straight sinuses. After rupture of the membranes this region of the child's head is subjected only to atmospheric pressure, while all the rest of the child's body, being surrounded by amniotic fluid, is subjected to the pressure of the contractions of the uterus and the abdominal muscles. There occurs an enormous congestion of the longitudinal, the straight and the transverse sinuses. The vein of Galen and its branches are supplied by arteries which enter through the noncompressible base of the skull. These veins are unable to empty themselves into the already overfilled straight sinus and are subjected to the greatest strain. In these veins occur congestion, thrombosis and hemorrhage, depending upon the intensity and the duration of the pressure. The terminal veins and the lateral ventricular veins are the ones most often torn. It is in the areas of the brain traversed by the branches of the vein of Galen that most of the lesions are found in spastic diplegia.

Prolonged pressure upon the infant's head, excessive molding, tentorial tears, prematurity and hemorrhagic disease are also important causes of both meningeal and intracerebral hemorrhage.

We are particularly indebted to Sharpe from a neurological standpoint for keeping

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before us the importance of birth injury. He examined clinically 5,192 cases of spastic paralysis. Eighty-one per cent were first-borns, 90% gave a history of prolonged and difficult labor, forceps were used in 76%, 17% were breech delivery, 64% were drowsy in the first week, 23% refused to nurse, 78% were not normally hungry, 39% showed twitching, 17% convulsions. Two weeks after birth 61% were considered normal and one month after birth 81% were apparently normal. Unfortunately no large series of cases has been followed from birth with a record of accurate observations of birth and the newborn period, and lumbar or cisterna puncture. I predict that such reports will soon appear.

No one doubts the frequency of birth injuries and intracranial hemorrhage. It is inconceivable that such injuries could cause so many deaths soon after birth and not cause permanent damage to the brains of a certain percentage of those who survive the injury.

Certain facts must constantly be borne in mind.

1. The fallacy of so-called "normal birth." Probably very few children are born without some injury. There is considerable molding of the head in most labors and all children are subjected to a certain degree of cerebral congestion during uterine contractions.

2. Because the cerebral cortex is not functioning at birth there can be considerable damage to the brain, without the appearance of very definite clinical signs during the newborn period.

3. Signs of brain injury may be present soon after birth but disappear in one to four weeks and the child be considered normal by the parents and the family doctor until the age of seven or eight months, when it is noticed that the child does not sit up, grasp objects, etc. This latent period without definite signs is one of the chief reasons why the later disability is not associated with birth trauma.

4. Certain neurologists and orthopedists and a few pediatricians have been slow to recognize the importance of birth injury because of their lack of association with labor and the newborn baby. They see their cases long after the pains and difficulties of labor have been forgotten by the mother and have no one to give them an accurate history of the course of labor and any signs which may have existed during the first week of the newborn period.

5. The distinction between meningeal and cerebral hemorrhage is important. It takes more than simply opening the skull and looking at the dural folds and the meninges to rule out intracranial hemorrhage. Those who oppose the theory that birth injury causes spastic diplegia give the following reasons for their belief. At autopsy signs of meningeal hemorrhage are not always found. They overlook the fact that the hemorrhages and other circulatory disturbances which destroy brain cells and tracts commonly occur within the brain itself. They say that meningeal hemorrhage resulting from labor is unilateral in at least half of the cases while the spasticity in cerebral diplegia is usually symmetrical or nearly so. Again, they do not take into account the intracerebral damage which is usually symmetrical or at least involves both sides of the brain. When Freud in 1897 stated that meningeal hemorrhage was not the cause of cerebral diplegia he did not realize the importance of intracerebral hemorrhage.

In view of the frequency of spastic paraplegia in premature infants, some consider it an arrest of development due to prematurity. It does not seem reasonable that one system of the body—the nervous system—or one part of it—the pyramidal tracts, could be singled out with any regularity for lack of development unless it were damaged by hemorrhage or some other process.

Another vague theory is that most cases of diplegia are due to a primary degeneration of certain neurons in the brain from some unknown cause. A few would attribute it to heredity, others to ill health of the mother during pregnancy or to fetal encephalitis of toxic or infectious origin. It is quite probable that a few diplegics, especially some of those accompanied by microcephalus and idiocy, are due to congenital defective development of the brain. A few may also be due to an intra-uterine encephalitis. The evidence, however, is growing that the pathological lesions which are found in the brains of these children are usually the result of hemorrhage originating at the time of birth. We must admit that this conception of the etiology holds out

more hope, at least for prevention, than the theory of primary neuronic degeneration from unknown causes.

For the ultimate clarification of this disputed subject, and the possible prevention of some of these unfortunate cripples, we need more carefully recorded histories of the course of labor: the position of the child, the duration of labor, the use of forceps or pituitrin and the condition of the child at the time of birth. We need especially more accurate observations and records of the child during the newborn period. These observations and records are sadly lacking even in many modern obstetrical hospitals. We have as yet very crude standards for observing and recording the behavior of the newborn baby. We need more minute, skilful and complete autopsy records of newborn infants, on those children who give a history of difficult labor, and especially on children who have spastic paralysis.

We need to exercise the utmost of skill and care in the diagnosis and treatment of intracranial hemorrhage in the newborn, for with early diagnosis and proper treatment some cases of cerebral diplegia can be prevented.

We need a continuous, strenuous program of education for the general practitioner who still does the most obstetrics. He must be taught the dangers of physiological labor and the still greater dangers in prematurity, difficult labor, haste in delivery, forceps, version, breech presentation and rough resuscitation. We need closer coöperation between the obstetrician, the neurologist, the orthopedist and the pediatrician.

REPORT OF A CASE OF BRONCHIAL ASTHMA DUE TO MOULDS

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The rather unusual occurrence of moulds as a factor in producing bronchial asthma merits a report of this case. Search has revealed few cases reported due to this type of sensitization; however, it is of sufficient importance for careful consideration in the diagnosis and treatment of bronchial asthma, especially with farmers and those that come in contact with such agents.

This patient, D. B., a farmer, aged forty, came to us April 30, 1931, complaining of bronchial asthma of several years' duration. First attack was experienced fifteen years ago, while threshing. Following this attack he had a similar attack in succeeding years during harvesting time. For the last five years in the months of October and November the patient has had asthma in a severe form. It is at this time that the silo on the farm is opened and the stock is fed from this silo. The contents of the silo consists of corn stalks, corn, grass and weeds. A few days after the opening of the silo there is a form of mould found on the feed stuff, and, using the patient's own words, he says that everything that is musty seems to bring on his asthma. Contact with stock and pets on the farm apparently has no influence on his asthma. This patient has one son, who also is subject to asthma. Family history is otherwise negative for allergy. On examination, the patient presented the typical picture of the chronic asthmatic, tall, thin, and of fair color. Patient presented considerable difficulty in breathing, with much wheezing, chest slightly barrel shaped, loud musical râles heard throughout the chest, heart normal position, no murmurs, abdomen and extremities normal.

Sensitization tests were done with 212 proteins, all scratch tests were negative. Intradermal tests revealed moderate reactions to timothy, orchard grass, sweet vernal, giant ragweed, chicken feathers and corn.

The patient was desensitized to grasses and the ragweed group. During the following threshing season he was free from asthma, but on opening up the silo on October 28, 1931, that night he had a severe attack of asthma and he continued to have asthma when handling the feed from the silo. The patient stated that he was suspicious of the corn smut, so he was tested against the corn smut, but no reactions were obtained. From the patient's history we decided there must be some other proteins in causing his symptoms besides above named factors. He was then tested to various moulds and for the first time on a scratch test he gave marked reactions to Aspergillus fumigatus. From the patient's history of being free of asthma when off of the farm and also of having asthma when coming in contact with mouldy grains and feed, also marked positive reactions to the moulds Aspergillus fumigatus, it seems logical to believe that this patient's symptoms are due primarily to moulds.

In the management of this case, patient was desensitized to grass and ragweed and advised to avoid contact with all mouldy grains, etc. At the present time this patient is entirely free of his asthma.

Conclusions: Asthma sensitization due to moulds comparatively rare in literature. Skin tests using moulds on forty-three asthmas were all negative. While sensitization to moulds is rather unusual, testing should be done with it in all obscure cases of asthma.

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THE TREATMENT OF MALIGNANT AND PREMALIGNANT DERMATOSES*

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Malignant epithelial new growths of the skin and mucocutaneous surfaces have been classified since the time of Paget (1855) under two terms—"Flat" and "Infiltrating." It was the macroscopic morphology and the clinical course of the tumors which prompted physicians like Thiersch, Unna and others to perpetuate such a classification, so that today a flat carcinoma applies to the early rodent ulcer of Jacoby, and the infiltrating includes the squamous and mixed cell carcinomas. With the advent of the compound microscope, the microtone, differential stains, etc., microscopic cellular architecture has replaced the gross morphology, and a histopathologic classification has resulted which, in reality, is only an improved classification.

Today some skin histopathologists classify the malignant epithelial new growth under two divisions, namely, carcinoma and mixed cell epithelioma. This is rather unfortunate as it excludes both the benign epithelial tumors, arising from the basal layer of the skin or adnexia, which frequently undergoes carcinomatous degeneration in their later stages, as well as the premalignant dermatoses such as senile keratoses, leukoplakia, etc. Likewise, this histopathological classification of malignant epithelial new growth does not include nevi or the tumors arising from the pigment-forming tissues, which are classified by some as being nevocarcinomas and by others as nevosarcomas.

In the true sense of the word, carcinoma of the skin should be applied to describe only those malignant proliferations of the epidermis which tend to infiltrate and to invade the lymphatic spaces between fibrous bundles of the corium and in this way disseminate or metastasize. True carcinomas metastasize.

In this paper the term "epitheliomata" will be used to include both carcinoma and the rodent ulcer, which is classified by many as a benign tumor. Granted that the cell architecture will not warrant the basal type being classified as a true malignancy, it not infrequently happens that the location of the growth makes it extremely malignant. This is particularly true of the commonly seen growths on the eyelids, face and nose which have a tendency to slowly invade the orbital region. As the growth advances, the bone is invaded and death may ensue from hemorrhage due to an erosion of a blood vessel or less frequently to involvement in the brain.

Time will not permit us to go into the histopathology of the different epidermoid carcinomas, and, since the basal cell type runs a very much different clinical course, responds differently to treatment, and the prognosis is usually entirely different than that of a squamous cell variety, its treatment requires special description. We shall use, for the sake of brevity, the term "carcinoma of the skin" in its restricted sense, including only the squamous cell variety of new growths, and the smaller groups which are composed of the mixed cells.

Treatment of carcinomas of the skin will be discussed under six general heads—

(1) Prophylactic
(2) Surgery
(3) X-ray and Radium
(4) Combination of X-ray, Radium Therapy and Surgery
(5) Electro-coagulation
(6) Chemical Caustics—Pastes.

Prophylactic: Cancer prevention is the ideal method of treatment. It is the duty of the physician to point out the relation between chronic irritation and its effect in the origin of cancer even though much still remains to be learned about the cause of cancer. Ewing, in one of the Wayne County Beaumont Foundation Lectures, stated "Intraoral cancer is so closely dependent on bad teeth, tobacco and syphilis, that if these conditions were removed this group of cancer would disappear." So the clouds of obscurity are gradually being lifted and we can definitely assure our patients that cancer results in a losing battle against irritation and infection, and the

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early removal of such prevents the degenerative processes from going further and thereby prevents a possible development of cancer.

Surgical treatment of epithelioma of the skin has been successful in many instances in the past. The author is of the opinion that it should not be used to the exclusion of X-ray and radium therapy in these modern times when there are so many thoroughly trained radio-therapists. The neighboring lymphatic glands should always be irradiated in skin carcinomas. Surgery should be considered as an inferior method of treating a malignancy because a larger percentage of permanent cures are obtained by irradiation and the cosmetic results are much better.

X-ray and Radium Therapy: Irradiation therapy is the method of choice in treating most malignancies of the skin. Either X-ray or radium used in carefully measured doses gives consistent and permanent results in most cases. Even in the metastatic skin carcinomas (carcinoma en cuirasse) irradiation therapy is still the best palliative form of treatment. One may ask at this point why it is possible to use either X-ray or radium in treating skin epitheliomas since there is a wide variation in the wave lengths in X-ray and the gamma rays of radium are even shorter and more penetrating. The energy of both is carried by electro-magnetic waves in small bundles, called quanta, but, as far as science knows, the same surface reaction results regardless of the wave length, provided the time factor varies with the filter, the size of the area treated, the time, etc. The so-called superficial X-rays, or the long rays, distribute most of their energy on the surface of the skin, while the short X-rays and the gamma rays of radium penetrate and distribute their energy to cells which the longer rays cannot reach. Hence, short X-ray and radium are indicated in the infiltrating type of malignancy of the skin and for the neighboring lymphatics. A proper depth dose must be given. The long waves are indicated when the so-called "cyto-caustic reaction" is desired. This reaction will be mentioned later in describing the hypermassive method of treatment for small basal cell lesions.

Method of Treatment: Each carcinoma is treated as an individual case. Its location, cell type, previous treatment, age of the patient, and associated diseases are factors which are considered before treatment is started. When it is possible and there are no contra-indications, the hypermassive fractional method of treatment is employed, using both filtered and unfiltered X-rays. For example, a squamous cell carcinoma of the cheek of approximately two cms. in diameter is treated locally. That is, the surrounding skin is thoroughly protected with lead and a hypermassive unfiltered treatment of five or six erythema doses may be given on the first day. This is supplemented by daily treatment of filtered X-ray for a period of approximately three weeks, following the Pfahler modification of the Van Zwaluwenburg-Kingery technic. The neighboring lymphatics are treated after our own modification of the Pfahler technic.

Radium is used in select cases. Regaud's method of treatment is used on the local lesion as well as on the lymphatics. This method requires a long time, since the radium is heavily filtered through platinum. We are of the opinion that this method is biologically sound as the length of treatment time required is sufficiently long to act on many of the cells during mitosis or during the stage when they are most easily affected by irradiation. Regaud states that the beneficial reaction following the use of radium is due to the so-called "elective" reaction, while radium destroys many malignant cells by this so-called elective reaction with doses which would be insufficient to produce destruction to normal cellular tissue. It is possible, however, to increase the dose so that's cytocaustic reaction follows. It is possible, then, to grade the dosage so that a malignant cellular absorption results. Regaud describes this peculiar property of radium as "a delicate cellular dissection" of the cyto-lethal elective action.

When the malignancy of the skin is a large one, the proper depth dose in X-ray treatment can be regulated by dividing the surface into small areas and treating each area individually. As a rule, we do not treat an area over 2 cms. square with a hypermassive and unfiltered X-ray. With the hypermassive treatment we do attempt to get some cyto-caustic reaction and our results on some of these hopeless cases have been most gratifying.

Combined Treatment of Surgery and Radiation: We have treated a number of lip-carcinomas with metastatic sublingual glands by the combined method of surgery

and radium packs. Our best results have been obtained by first treating the associated lymphatics with a radium pack, using platinum as a filter and the technic as outlined by Regaud. Later the lymphatic glands are dissected from the neck and after recovery from the surgical operation a second radium treatment is given, approximately four weeks after the surgical operation. We have several patients who have been clinically well three and four years after such treatment.

Electro-Coagulation Method: This method of treatment is particularly serviceable in treating lesions which have been underdosed over a long period of time with fractional divided X-ray doses. It is also indicated in a malignant degeneration of a roentgen dermatitis. This form of therapy stimulates the formation of new blood vessels, while repeated X-ray doses have a tendency to destroy the blood vessels. In some cases the electro-coagulation method is supplemented with deep X-ray therapy over the associated lymphatics. This, however, is not always necessary, depending upon the cellular architecture of the lesion.

Paste or Chemical Caustics: In the past, some physicians, as well as many lay-people, have applied pastes on malignant new growths. The particular paste which enjoys a fairly common usage among the cancer charlatans contains a very high percentage of arsenic which, when applied to the skin, produces a terrific destruction and on healing a horrible scar results. It very frequently happens that a terrific ulceration is set up which may never heal and only a relatively small percentage of the malignant lesions so treated results in a permanent cure. This form of treatment is mentioned in this paper only to be condemned because there are many superior methods of treatment.

Treatment of Basal Cell Carcinomas: Rodent ulcers, at least in their early stages, are localized lesions and do not invade the lymphatic nodes. A wide surgical excision results in a permanent cure of many of these lesions. The surgeon has a tendency, however, to remove only the ulcerated portion and thereby frequently leaves small cell nests which later result in recurrent malignancy. We are of the opinion that irradiation therapy is the superior method of treatment in the superficial type of malignancy. The basal cell carcinomas respond very readily to the hypermassive form of treatment, and their failure to respond to X-ray therapy is due to the fact that the lesion is underdosed early in treatment. If the lesion is a large one, that is over 2 cms. in diameter, the small areas at the periphery of the lesion are treated by the lead block method. This enables the operator to give the proper depth dose and avoid an extensive cyto-caustic reaction.

Treatment of Nævo Carcinomas: Our best results are obtained in this hopeless group of malignancies by using a combined method of treatment of irradiation and electro-coagulation. The local lesion is treated with heavily filtered doses of either X-ray or radium which are followed in a few days by electro-coagulation. The destruction must be very wide and deep. The lymphatics are then treated with heavily filtered X-ray over a period of three weeks.

The removal of the bluish-black moles and pigmented birthmarks, which are apt to be irritated by clothing, by the electro-coagulation method has undoubtedly prevented their degenerating into nævo carcinomas. When a mole is removed some normal tissue should be sacrificed since the irritation resulting from only a partial removal may be sufficient to start a malignant change.

Treatment of Sarcoma of the Skin will not be discussed excepting to state that heavily filtered X-ray doses are usually used.

Treatment of the Pre-Cancerous Dermatoses: Irradiation therapy is the method of choice in treating the pre-cancerous dermatoses. Either radium or X-ray may be used. The surrounding skin should be thoroughly protected particularly when hypermassive, unfiltered X-ray doses are given.

Leukoplakia: Some leukoplakias can be successfully treated by a removal of the irritating factor, such as smoking, the correction of poor mouth hygiene, the removal of infected teeth, etc., and later this may be supplemented with radium treatment.

Conclusions: Hypermassive irradiation treatment is the best known method of treating basal cell epitheliomas and precancerous dermatoses. The results are more uniform and recurrences less frequent. Irradiation is also the method of choice in treating squamous cell carcinomas of the skin.

THE THYROGENIC HEART*

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DETROIT, MICHIGAN

The term "goiter" is somewhat indefinite. In the broad sense it is usually applied to any and all enlargements of the thyroid gland. More commonly the more modern expression, "toxic goiter," is used, and probably as an all-embracing term it is more appropriate, because, in all the various manifestations of the disease, the two central facts are, first, that there is a goiter, and secondly, that there is thyrotoxis. The dual conditions I shall hereinafter refer to as hyperthyroidism, but only under certain explanations and differentiations.

There are diseased thyroids which show practically no enlargements, yet they exhibit symptoms of toxemia, which naturally suggests the premise that the degree of hyperthyroidism is not dependent upon the size of the goiter. To go further: it has long been recognized that the differences in the manifestations of the disease have been so great as to indicate that there are really two separate diseases, one being called "exophthalmic goiter," and the other "adenomatous goiter with hyperthyroidism." Willius and Boothby are emphatic on this point, and their definitions of the two diseases are herewith quoted so as to clarify the concept as understood in this discussion:

"Exophthalmic goiter is a constitutional disease, apparently due to an excessive, probably an abnormal secretion of an enlarged thyroid gland, showing pathologically diffuse, parenchymatous hypertrophy and hyperplasia. It is characterized by an increased metabolic rate, with the resulting secondary manifestations, with a peculiar nervous syndrome and, usually, exophthalmos, with a tendency to gastro-intestinal crises of vomiting and diarrhea. The cause of the altered process and activity of the thyroid gland, if not unknown, is at least a matter of wide differences in opinion.

"Adenomatous goiter with hyperthyroidism is a constitutional disease, due to the presence in the thyroid gland of adenomatous tissue, which, by maintaining an abnormally high and unregulated concentration of thyroxin in the body, causes an increased basal metabolic rate, with the resulting secondary manifestations."

T. P. Dunhill of St. Bartholomew's Hospital, London, in an address made recently before the Inter-state Post Graduate Medical Association of North America, stated that observation over many years had driven him to the conclusion that patients may be seen showing every gradation between these two types, and that there is no well defined dividing line, and no gaps. Can we therefore say that the particularly named diseases attributed to Graves, Stokes, Basedow, et al., and our more modernly identified conditions known as exophthalmic goiter and toxic adenoma, may all be classified under the inclusive term, "hyperthyroidism"? For the practical elucidation of my particular subject, The Thyrogenic Heart, I think they can all be so included.

I have just made mention of the fact that the cause of the altered process and activity of the thyroid gland is a matter of wide differences in opinion. One school of thought believes that hyperthyroidism originates in the gland itself, while other investigators hold to the theory that the gland has had imposed upon it activity and enlargement due to external influences. It is becoming more and more recognized that a relation exists between the thyroid, gonads, pituitary, and possibly others, but it is not yet definitely known whether the polyglandular syndromes are due to coincident disease of several glands or to dysfunction of one reacting secondarily on another. I mention this difference of opinion on account of the influence the opposed conceptions may have in treatment. George W. Crile, of whom a fluent Southerner has said, he possesses such exquisite operating technic that he can "steal the gland with his patient's consent, but without his knowledge," is an enthusiastic proponent of the latter argument, and in support says:

"The route through which the thyroid gland becomes enlarged and hyperplastic is the adrenal gland and the sympathetic nervous system. The adrenal gland very certainly has an enormous power of driving the sympathetic nervous system, and in turn the sympathetic nervous system drives the thyroid, and when the thyroid is driven, it increases the output of thyroxin, and that increase of thyroxin sensitizes the nervous system so that the nervous system

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again is more sensitive to an incoming stimulus, and that, in turn, drives the adrenal gland harder, and so a vicious circle is set up."

Warthin also enters the lists at this juncture, with a pronouncement which, if not novel, is at least the latest in enlightenment on the subject of causation. He points out that in the general conception of hyperthyroidism there is a constantly enlarging clinical syndrome to which symptom after symptom has been added, until it has become impossible to distinguish clinically between exophthalmic goiter and toxic adenoma. He also considers that all individuals who may be grouped into either of these broad and variable syndromes present a clinical picture of a well defined type of distinct pathological constitution. In Europe they call this the hyperthyroid constitution. Warthin prefers the term, Graves' constitution, and is unwilling to believe that thyroid hypersecretion is the underlying etiologic factor in the development of hyperthyroidism. He believes that this constitution is predetermined at birth, and that the potentiality may remain latent or quiescent during the whole or part of the life of a person possessing it. Thyrotoxic symptoms, however, may develop at any time if there is a constitutional anomaly in that direction.

Hyperthyroidism is predominantly a disease of females, various authorities going so far as to state that prevalence as to sexes ranges all the way from one male to twenty females to one in six, depending on districts or countries where the disease is epidemic or not. Goiter, as the primary feature of the condition, has a predilection for certain neighborhoods. The local absence of iodin in food and drinking water probably, in large measure, accounts for its prevalence in such goiterous countries as Switzerland, and the areas immediately around our own Great Lakes. Some authorities consider that the present day rapid mode of living, the "jazz age," with its continuous excitement and stimulation of the emotions, has a not insignificant part in causation and increase in world-wide prevalence.

Excitement demands an increase in the secretions of the thyroid gland. That is an admitted physiologic fact. The World War saw many soldiers develop goiter practically overnight, which could only be attributed to the excitement and stress of warfare. But, the hereditary background must also be taken into account,—individuals who show such distressing symptoms and pathology on such short notice, were undoubtedly goiter victims *ab initio*.

Apart from the later cardiovascular manifestations, the chief symptoms of hyperthyroidism are to be found in the thyroid gland, eye, skin and muscles. When enlarged, the thyroid is usually soft and elastic, profuse with new blood vessels, and pulsating with variations in proportion to the intensity of the symptoms. The exophthalmic symptoms consist of a marked and variable protrusion of the eyeball, with wide orbits, often greater on one side than on the other. Von Graefe's sign is frequently to be observed,—a failure of the eyeball to move downward with the upper lid in looking downward. Irregular or stiff pupils are not uncommon, as well as a loss of the accommodation reflexes. Exophthalmos is rarely seen in the very young. In adults, it is usually marked, the more so as old age approaches.

The association of cardiac disturbances with thyroid disease has been more or less recognized for over a century. That pioneering thyro-cardiologist, the English physician, Caleb Hillier Parry, observed it in his first described case of exophthalmic goiter in 1815, which eventually had a fatal termination with symptoms of heart failure. From a historical and clinical viewpoint, Parry's report on this case, posthumously published by his son in 1826, approaches the classical. Forerunner of so many similarly observed cases in the years to come, it might well be excerpted from a 1932 case history. I quote it herewith:

"A married woman, aged thirty-seven, caught a cold in lying in. Subsequently she became subject to more or less palpitation of the heart, very much augmented by bodily exercise, and gradually increasing in force and frequency till my attendance, when it was so violent that each systole shook the whole thorax. Her pulse was 196 in a minute, very full and hard, alike in both wrists, irregular as to strength, and intermitting at least once in six beats. Twice or thrice she had been seized in the night with a sense of constriction and difficulty in breathing, which was attended with spitting of a small quantity of blood. She described herself also as having frequent and violent stitches of pain about the lower part of the sternum. About three months after lying in, while she was suckling her child, a lump about the size of a walnut was perceived on the right side of her neck. This continued till the period of my attendance, when it occupied both sides of her neck so as to have reached an uncommon size, projecting forward before the lower angle of the jaw. The part swelled was the thyroid gland. The carotid arteries on both sides were greatly distended, the eyes were protruded from their sockets, and the countenance exhibited an expression of agitation and distress, especially on any muscular

exertion, which I have rarely seen equalled. Bowels were usually lax. For a week she has had edematous swelling of her legs and thighs."

Following Parry, came a long line of observers from various countries who, at various times in the ensuing century, in turn contributed their time-honored impressions to the written history of hyperthyroidism and its cardiac associations: the Irishman, Robert James Graves, in 1835; the German, Karl von Basedow, in 1848; another Irishman, William Stokes, in 1854; and that brilliant Frenchman, Armand Trousseau, in 1856. Nor is the roster of thyrogenic pathfinders complete with a recapitulation of these historical names, as will be referred to later in this paper.

The expression, "goiter or thyroid heart," is comparatively new to American medical terminology, and our scanty literature on this important subject is even much later than American recognition of the thyrocardiac complex. In this respect we have lagged behind the Europeans, especially the Germans: as long ago as 1899, Friedrich Kraus coined the term, "Kropfherz," of which "goiter or thyroid heart" is a literal translation.

Now to consider the question of the etiology or primary cause of cardiac involvement in hyperthyroidism. Some few authorities consider that there is a certain degree of cardiac disturbance in all cases and with all forms of goiter. Others range their estimates of incidence all the way from 25 to 75 per cent. It will thus be seen that there is more than a little difference of opinion on the subject, which probably can, in large part, be accounted for by the difference in opinion as to what really constitutes cardiac involvement. Does tachycardia indicate a symptom of cardiac change, or can that only be explained by actual symptoms of heart failure? The fact remains, however, that cardiac changes do occur frequently enough to be considered a definite clinical entity, hence the term "goiter or thyroid heart," or "the heart in hyperthyroidism."

What are the etiologic or primary causes of cardiac involvement? To answer this question, a word of qualification must first be interpolated. We do not know absolutely the cause or causes, for the most modern conception is but based on a mixture of theory and fact,—more theory than anything else, but in the main, fairly well substantiated theory. This falls into three well defined channels which may be expressed as follows: the theory of mechanical pressure; the toxic theory; the mechanical theory of increased metabolism. There is, too, an accumulation of evidence that the causation might properly be attributed to a combination of conditions embracing pressure, increased metabolism, toxicity, and possibly some other elements, all acting simultaneously.

In support of the first theory which, by the way, is the oldest theory, that famous Frenchman, Pierre Carl Edouard Potain, in 1863, reported several cases of heart failure in which large colloid goiters pressed upon the veins and trachea. Out of his observations there has been built up, through the intervening years, the conception that such goiters have the following mechanical effects: they prevent adequate filling of the lungs, and thus produce emphysema, deficient aeration of the blood, and later asphyxia, with an end-result of cardiac overstrain. When this latter becomes chronic and progressive, there would be a finality of myocardial weakness.

A large goiter often presses upon the sympathetic ganglia on one or both sides of the neck, thus stimulating the accelerators, and bringing on tachycardia. The circular part of the ciliary muscle (Muller's muscle) may also be stimulated, and exophthalmos produced, which dual conditions,—exophthalmos and tachycardia,—are nothing more or less than the identical symptoms of Basedow's disease, without the toxicosis.

The weakness of the pressure theory consists in the fact that concurrent heart disease is frequently encountered in hyperthyroidism, even when the thyroid gland is not appreciably enlarged.

The explanation of the theory of increased metabolism is that the excess of increased thyroid secretion in the blood results in an oxidation process, and the breaking down of proteids in the tissues and bones, and the loss of weight due to loss of muscle substance, so that increased work on the part of the heart is necessitated. If prolonged for an indefinite period, this will eventually result in cardiac fatigue.

The toxic theory seems to be the focus of most attention at the moment, and this, briefly, is based on the supposition that the substance secreted by the thyroid gland, be it increased or altered thyroxin, poisons the

myocardium, acting either through the cardiac nerves, or directly on the heart muscle.

Hirschfelder, enlarging on the physiologic effects of thyroid secretion, shows that there is also a general stimulation of the peripheral nerves, both medullated and sympathetic. He further points out the distinct action of these substances on the circulation:

> They stimulate the depressor or afferent nerves from the heart, giving rise on the one hand to cardiac sensations, palpitation and anginal pains, and on the other hand to vaso-dilatation and low diastolic blood-pressure.
>
> They stimulate both the vagi and the accelerator nerves, the action on the accelerators being predominant and causing tachycardia. The same stimulation of the other fibers of the cervical sympathetic gives rise to the peculiar ocular signs of the disease, the protruding eyeballs.

Cleghorn, in describing the effects of thyroid extract on the cardiac muscle, has shown that there is an increase in the size and force of the contraction, which manifests itself in the increased pulse pressure, increased maximal pressure, and cardiac hypertrophy. From experimentally induced hyperthyroidism in animals, it has been noted that various other infections have been simultaneously incurred, which naturally suggests the possibility that many cardiac changes in humans may be the result of secondary infections. This raises up another theory of cause, on which further investigation may throw some light.

The leading authorities seem to be in complete accord that the most important clinical problems cardiovascularwise arise when the heart is involved in toxic thyroid conditions,—in cases of exophthalmic goiter and toxic adenoma,—true hyperthyroidism. Simple goiter, non-toxic adenomatous goiter, and myxedema also provide certain cardiac complications on occasion, but not to the same extent. In any case, these latter conditions are not contained within the scope of my discourse, and may be dismissed from the present discussion.

A very frequent set of symptoms often observed in the early stages of hyperthyroidism, consists of palpitation, tremor, tachycardia, which may be occasionally paroxysmal, dyspnea, and sometimes a mild sensation of intermittent pain in the region of the apex of the heart. In the absence of more conclusive evidence, one could hardly assume that the heart has actually been damaged, although the inference can properly be drawn that it is undergoing a strain, and the symptom of tachycardia alone should be clinical evidence enough to prove that the immediate cause is the hyperthyroidism. Of all functional findings in such cases, tachycardia is pre-eminent, and I attach a significance to this single symptom, whether the irregularity be temporary or continuous, to the extent that whenever I find it, I immediately look for a possible hyperthyroid background.

I grant you that the same symptoms might easily be the result of an increased amount of work imposed on the heart by violent exercise, but in this event, the symptoms would naturally subside with the cessation of the exercise. When established, and as an accompaniment of hyperthyroidism, subsidence would be dependent on the remission of the disease, either spontaneously or by appropriate treatment. The fact I want to drive home is this: that most thyro-cardiac conditions begin inauspiciously, at first burdening the heart but little, and often of insufficient prominence to demand serious attention. When surgical intervention is resorted to for the glandular trouble in the early stages, the heart symptoms are seldom, if ever, considered an added risk. It is when the hyperthyroidism persists for months or years, that the accompanying heart complications acquire clinical importance.

The successive steps in the establishment of heart disease have been well demonstrated by Thacker, Willius, Hirschfelder, and others. There is the increased metabolism, and increased cardiac work as evidenced by tachycardia, increased output of blood, and a tendency towards hypertension. Fatigue eventuates, which leads in turn to hypertrophy, lack of tonicity, and dilatation without valvular defects. The pulse may beat 100 to 160 or over; on auscultation the first sound is usually accentuated, with a frequence of systolic murmurs at the base; all of which signs and symptoms are likely to disappear if the hyperthyroidism abates spontaneously, by treatment, or by surgical operation, before the heart is seriously involved.

Toxicity assists in the degenerative process, especially if the heart is constitutionally weak and susceptible. Such arrhythmias

as auricular fibrillation and auricular flutter are usually the final symptoms of definite heart failure, which most commonly is of the congestive type. The diastolic murmur of aortic origination, or the pre-systolic murmur of mitral causation, are not symptomatic of a hyperthyroid base. When present, the explanation will usually be found in cardiovascular syphilis and rheumatic fever.

A word may now be said on pathology. The most usual findings are moderate hypertrophy of the left ventricle, dilatation of the right chamber, and slight fatty change. Sometimes there are a few scars and round cell infiltrations, but in the majority of cases no marked changes are to be seen, even though the patient may have evidenced undoubted symptoms of heart failure during life. In 1926 I had the privilege of hearing Cyrus C. Sturgis, of Ann Arbor, address the Inter-state Post Graduate Assembly of North America, and was impressed in a very permanent way with a statement which he then made:

"I have observed two patients with Graves' disease who died a cardiac death, and at necropsy were found to have myocardial necrosis, which in one case was widespread, and in the other focal in distribution. The pathologist interpreted these lesions as indicative of an extreme intoxication acting upon a myocardium which was bordering upon complete exhaustion and, therefore, susceptible to injury. It is more common, however, for the pathologist to find only relatively slight changes in the heart, even when the patient has presented all of the clinical evidences of cardiac failure. This is merely another example of the inability of the pathologist to demonstrate an anatomical change when there is functional impairment. The riddle of the cause of cardiac failure in exophthalmic goiter and toxic adenomatous goiter must await an advance in methods of study and more observations for its complete solution."

No study of hyperthyroidism can possibly be complete without an understanding of the principles of basal metabolism and the method of arriving at the rate. It is a measure of the activity of the thyroid gland, the internal respiration or oxidation in the tissues. The basal metabolic rate is increased with over-activity, not necessarily associated with an increase in the size of the gland, and decreased with under-activity, the determinations being most helpful in making a diagnosis, and also serve to demonstrate the efficiency of the treatment, besides regulating the dosage.

In approaching the subject of treatment of the thyrogenic heart, I will begin by perpetrating an intentional bull: treat it before it gets that way! In other words, if a Sinai-like commandment were asked for and be permissible, I would without hesitation hand it down to the effect that if glandular abnormalities were detected and properly checked at the first intimation of symptoms, there never need be a thyrogenic heart. How many children of school age do we yet see, with thyroid manifestations and unsightly necks, which have received little or no medical attention, even in the face of all the goiter propaganda disseminated by health and educational authorities? These comprise the majority of the thyrogenic hearts to be. Feed these children iodin now and you will materially, perhaps almost totally, reduce the incidence of hyperthyroidism with its cardiac complications ten, fifteen or twenty years hence.

You cannot cure goiter with iodin after the patient is twenty or twenty-five years of age. Iodin can do little for a long standing case of hyperthyroidism, and the effects it has on cardiac conditions might well be duplicated by drinking aqua pura! Iodin therapy is most effective in the young, and about the only indications for its use in grown-ups are as a means of preparation for surgical interference, and sometimes in post-operative treatment.

Having thus disposed of the methods towards prevention of thyrogenic conditions, we will now proceed to what is germane to the subject of this paper: the treatment of the fait accompli, the actual thing, the heart which has been affected by hyperthyroidism.

The first essential of any palliative treatment is in the direction of amelioration or removing the causative hyperthyroidism, for none of the recognized measures which are usually employed in the treatment of heart disease can be of any permanent value until this is done. To reduce the thyroid secretion to its lowest possible ebb is the ultimate aim, and the principal methods at our disposal towards accomplishing this are: rest, radiation, medical and surgical treatment. These may be effective individually or in combination.

In mild cases, absolute rest in the horizontal position often lessens the secretion and diminishes the size and number of the heart beats. As undue exercise and over-excitement are so often the immediate causes of hyperthyroidism, it naturally follows that when the causative agencies are removed, the resulting symptoms, and especially the abnormal secretion, will tend to subside. Rest, physical and mental, is na-

ture's sovereign remedy in any condition, and I need hardly present a brief for it to any student of the cardiac complex. Psychotherapy and suggestion also have their uses. Who can doubt the sedative influence of the absence or abolition of worry, nervousness, and the neurotic tendencies which are so characteristic of this disease?

A patient suffering from hyperthyroidism, with its increased metabolic rate, expends more energy in performing a given amount of work than do normal individuals. Thus the loss in weight. High caloric diets should therefore be given because of these increased demands on the tissues. Exposure of the thyroid gland to X-ray therapy has many adherents. Personally, I consider such treatment of minor importance, with results less actual than psychological. Specific sera have yet to prove their worth.

There is a growing consensus of opinion that a combined course of surgical and medical treatment is the most rapid and most effective method for correcting thyroid abnormalities. Before discussing the nature and value of this, let us first consider what the objectives are. In the final analysis the successful management of a case of hyperthyroidism hinges on the achievement of five results: 1, relief of symptoms and elimination of abnormal signs; 2, reduction of the basal metabolic rate to normal; 3, reduction of the pulse rate to normal; 4, increase in weight to the normal standard; 5, restoration of economic usefulness.

As hyperthyroidism is peculiarly preponderant in the female of the species, the removal of unsightly goiters in these days of the much exposed epidermis, probably has a strong appeal, which deference to fashion often overcomes natural repugnance to surgery. An enlarged gland which patently presses on the important structures of the neck and is responsible for the visible distressing symptoms of the disease, should certainly be removed. Thyrotoxicosis is a sure indication for surgicaal operation, as are malignancies in all patients in middle age or past. Iodin in the form of Lugol's solution (compound tincture of iodin), should be given for a week or ten days with rest in bed. The basal metabolic rate and the pulse rate will go down, the tremor is likely to disappear, restlessness and excitement will abate, and the patient in this period will attain the maximum degree of improvement. Then should the surgeon operate, removing two-thirds or three-quarters of the gland. Some surgeons perform two or more operations at intervals rather than making too extensive an operation at one sitting. Total thyroidectomy is sometimes done, but this necessitates the continuous use of thyroid extracts afterwards. Lugol's solution should be continued after operation, nor should medical supervision cease with its successful termination.

So much for the treatment of the thyroid condition. What can be done for the cardiac complications? It is a clinical fact that most patients even with pronounced cardiac failure can safely undergo a thyroidectomy if proper pre-operative precautions are taken. In addition, there is usually a pronounced improvement in the cardiac symptoms after it is done. The cardiac burden is invariably lessened by the measures taken to reduce the basal metabolic rate. In fact the pre-operative treatment for the hyperthyroidism in every respect has a beneficial effect on the heart. Digitalis is useful where there is evidence of heart failure, and especially where there is auricular fibrillation or irregular heart action. Generally speaking, pre-operative management demands the careful consideration of each individual patient, and treatment should consist of every procedure that is of proven value in the relief of cardiac failure from other than thyroid causes.

Where there is a wide pulse deficit, râles at the base of the lungs, and obvious signs of edema, a thyroidectomy would probably be inadvisable until such conditions are appropriately treated. Briefly, the heart condition is generally worse the longer the duration of the hyperthyroidism. This again brings us back to my original remark: treat the thyrogenic heart before it gets that way!

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TREND OF CLINIC SERVICE IN DETROIT

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DETROIT, MICHIGAN

The basic data for this study were supplied by the Research and Budget Departments of the Council of Social Agencies of Metropolitan Detroit. These data were carefully checked, and present as accurately as available sources permit a true picture of clinic attendance and clinic costs in the City of Greater Detroit.

In Greater Detroit (population 1,675,000) there are three types of free or part pay clinics:

(a) *Community Fund Clinics:* These are maintained by hospitals or institutions and the operating expenses are met by the Community Fund, with money raised yearly by a city-wide campaign for private contributions. There are seventeen such clinics serving free and part pay patients.

(b) *City Clinics:* These are under the management of the City departments of Detroit and Highland Park, and are maintained by tax funds. There are five of these, and they are in general entirely free.

(c) *Private Charitable Clinics:* The Children's Fund of Michigan conducts a private clinic on a charitable basis since 1930.

1. AMOUNT OF CLINIC SERVICE

TABLE I. CLINIC VISITS AT COMMUNITY FUND CLINICS, OTHER CHARITABLE CLINICS, AND CITY CLINICS FOR THE CALENDAR YEARS FROM 1922 TO 1931 INCLUSIVE*

Year	Comm. Fund Clinics	Children's Fund of Mich.	City Clinics	Total Visits
1922	137,644	.....	No Report	.....
1923	135,215	.....	No Report	.....
1924	167,432	.....	No Report	.....
1925	185,551	.....	No Report	.....
1926	207,212	Established in 1930	No Report	.....
1927	292,917	.....	No Report	.....
1928	331,910	.....	421,557	753,467
1929	336,682	.....	421,936	758,618
1930	415,574	3,690	614,770	1,034,034
1931	475,651	5,651	863,839	1,345,141

*The above figures were obtained from the Research Department of the Detroit Community Union.

NOTE: The Detroit Water Board made the following population estimates of Metropolitan Detroit: 1922—1,031,600; 1931—1,675,000.

Table I shows the clinic attendance at Community Fund Clinics, Other Private Clinics and Public Clinics for the calendar years from 1922 to 1931 inclusive. An analysis shows that:

(a) In 1922, there were ten clinics associated with the Community Fund, totaling 137,644 visits. In 1931, ten years later, there were seventeen clinics associated with the Community Fund, totaling 475,651 visits, an increase of 250 per cent. During this period of time, the population increased approximately 62 per cent from 1,031,600 to 1,675,000.*

(b) In 1931 in Greater Detroit, a city with a population of 1,675,000, there were 1,345,141 visits made to all dispensaries, both Community Fund and City clinics, an increase of nearly 100 per cent in the last three years, due very largely to widespread unemployment.

(c) In terms of separate patients, 97,795 individuals visited the Community Fund Clinics in 1931. During the same year (1931), 300,998 individuals** were reported by *all clinics* (Community Fund and City clinics combined). No information is available on the amount of duplication among clinics. If this were an unduplicated count 18 per cent of the total population of Greater Detroit would have sought medical aid in these institutions in one year (1931).

2. COST PER VISIT OF SERVICE (EXCLUDING DOCTOR'S FEES)

Table II shows the cost per visit and the distribution of that cost in six Detroit Clinics maintained by the Community Fund for the years 1928-1931 inclusive. Table III shows the annual cost of service per patient in these six clinics and the distribution of that cost for 1930 and 1931.

It will be noted that:

(a) The average cost per visit for six Community Fund clinics† in 1928, 1929, 1930 and 1931, ranges from $1.05 to $1.43 (maximum for general clinics $1.63, minimum for general clinics $0.66), towards which the Community Fund appropriates approximately $0.79 to $0.97 per visit.

(b) The average annual total cost to the clinics in 1930 and 1931 for each patient, regardless of the number of visits made during the year, including all types of service rendered, was $6.59 for 1930 and $5.76 for 1931 (maximum for general clinics $12.40, minimum for general clinics $2.57), of which the Community Fund paid $4.74 during 1930 and $4.35 during 1931. The decrease in per visit cost and cost per patient per year to the Clinics for 1931 was very largely due to an increase in attendance or visits for that year without any increase in the non-medical personnel.

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*These estimates of the population for Greater Detroit were made by the Detroit Water Board.

**The exact number of separate individuals attending the City Physician's Office and Receiving Hospital O. P. D. could not be obtained. These were determined by dividing the total number of visits made to these two clinics by the average number of visits each patient made per year in the Community Fund Clinics.

†The clinics included in the analysis on cost are Grace O.P.D., Harper O.P.D., North End Clinic, St. Mary's O.P.D., Shurly O.P.D., and Sigma Gamma Clinic.

TABLE II

COST PER VISIT IN SIX DETROIT CLINICS MAINTAINED BY THE COMMUNITY FUND*

Distribution of Cost Per Visit

	1928	1929	1930	1931
Community Fund Appropriation	$ .93	$ .97	$ .84	$ .79
Per Visit Income (On Basis of Total Visits)	.44	.46	.33	.26
Clinic Cost	1.37	1.43	1.17	1.05
Cost to Indigent Patient	.00	.00	.00	.00
Cost to Part Pay Patient	.68	.75	.71	.82

*The clinics included are: Grace O. P. D., Harper O. P. D., St. Mary's O. P. D.—general clinics attached to the hospitals. North End Clinic—general clinic not attached or associated with any hospital. Shurly O. P. D.—special clinic (eye, ear, nose and throat) attached to hospital. Sigma Gamma Clinic—special clinic (orthopedics) not attached or associated with any hospital.

The basic figures (from which the figures in the table were derived) on cost of rendering the service in the above 6 clinics, the appropriation by the Community Fund and the receipts from part pay patients were obtained from the Budget Department of the Detroit Community Union. A small amount of contributions from sources other than the Community Fund does not appreciably affect the total.

TABLE III

COST OF SERVICE PER PATIENT PER YEAR IN SIX DETROIT CLINICS MAINTAINED BY THE COMMUNITY FUND*

	1930	1931
Community Fund Appropriation	$4.74	$4.35
Per pt. Income (on basis of total pts.)	1.85	1.41
Clinic Cost	6.59	5.76
Cost to indigent patients	0.00	0.00
Cost to part pay patients	4.03	4.52

*See footnotes Table II.

TABLE IV

ANALYSIS OF VISITS MADE TO ALL CLINICS MAINTAINED BY COMMUNITY FUND SHOWING FREE AND PART PAY VISITS

	1928		1929		1930		1931	
	Visits	Per cent	Visits	Per cent	Visits	Per cent	Visits	Per cent
Part Pay	199,519	60.2	194,351	57.7	172,697	41.6	133,067	28.0
Free	132,391	39.8	142,331	42.3	242,877	58.4	342,584	72.0
Total	331,910	100.0	336,682	100.0	415,574	100.0	475,651	100.0

NOTE: The above figures for total visits and total free visits were obtained from the Research Department of the Detroit Community Union.

TABLE V

ANALYSIS OF TOTAL CLINIC VISITS IN GREATER DETROIT (COMMUNITY FUND AND CITY CLINICS COMBINED) SHOWING FREE AND PART PAY VISITS

	1928		1929		1930		1931	
	Visits	Per cent	Visits	Per cent	Visits	Per cent	Visits	Per cent
Part Pay	201,578	26.8	196,535	25.9	175,963	17.1	134,847	10.0
Free	551,889	73.2	562,083	74.1	858,071	82.9	1,210,294	90.0
Total	753,467	100.0	758,618	100.0	1,034,034	100.0	1,345,141	100.0

NOTE: The above figures for total visits and total free visits were obtained from the Research Department of the Detroit Community Union.

(c) On the basis of this analysis, the total annual cost** of operating all of the clinics financed by the Community Fund ranged from $450,000.00 to $500,000.00, towards which the Community Fund appropriates from $310,000.00 to $360,000.00 annually.

The figures on costs do not include interest on capital investment or depreciation of building, furnishings and equipment; nor do they include remuneration to physicians for the services they render (except in a very few instances) as the physicians in attendance render their services gratis. Thus several very important items are not included.

It must also be remembered that the average clinic costs above given for services on an annual basis (*e.g.*, $5.76 per patient for 1931) do not represent in terms of money the average annual medical needs of these individuals nor, for that matter, the total cost of medical services they received during that year. These patients might have received, and undoubtedly did receive, services from other clinics, private practitioners, consultants, drug stores, irregular practitioners, etc. These items when added would increase the above figure.

3. PROPORTION OF PAYING VISITS

Tables IV and V analyze the total clinic visits in Greater Detroit showing free and part pay visits† for 1928, 1929, 1930 and 1931.

It will be noted that:

(a) The part pay visits to the Community Fund clinics (Table IV) decreased from 60.2% in 1928 to 28.0% of the total attendance in 1931.

(b) When all the Detroit dispensaries are considered (Table V), both the Community Fund and city clinics, the part pay visits decreased from 26.8% in 1928 to 10% of the total attendance in 1931.

The decrease in part pay visits was very largely due to widespread unemployment.

4. AVERAGE FEES OF PAYING PATIENTS

Tables II and III also show the average fees of paying patients both per visit and throughout the year. It will be noted that:

(a) The patients making free visits bring no income to the clinics, whereas the part pay patients pay fees for these services. In 1928, 60.2% of the total visits to the Community Fund clinics brought in on the average $0.68 for each visit, while in 1931, 28% of the total visits were part pay, averaging $0.82 for each visit.
The receipts for visits to expensive types of service such as X-ray, physiotherapy, and dental, materially increase the average receipts for the group as a whole. If average receipts per visit were segregated by types of service and compared with average costs in each type it is problematical whether the average receipts in any group would exceed the average costs. In addition it should be noted that in some clinics patients who receive free care in some departments make full payment in others.

(b) On the basis of average fees per visit for paying patients (as noted in 4a) the part pay patients pay to the Community Fund Clinics from $110,000.00 to $150,000.00 annually.

John W. Ross, V. Chairman

5. DOCTORS' SERVICES

An effort has been made to calculate in terms of visits and then to evaluate in monetary terms the amount of free service being rendered to the community by doctors who are giving their services, gratis, in clinics. This number of visits was arrived at by subtracting from the total clinic visits the visits to clinics which paid their doctors, and the visits on which the patient saw some member of the clinic staff other than a doctor (such as a dietitian, technician or nurse, etc.). The total of visits made to doctors who were not paid for their services, in both Community Fund and public clinics, was for the year 1931 over 500,000.

The physicians on the staffs of the above clinics are often specialists in their respective fields. In an effort to evaluate in monetary terms the amount of free service being rendered to the community by these doctors, it is assumed that $1.00 would be a fair index of their contribution to the community for each visit made to them by patients in clinics. On this basis the physicians contributed in terms of money free medical service valued at more than $500,000.00 during the one year of 1931. This, of course, does not include the free medical and surgical services rendered by these doctors to those clinic patients who were confined in hospitals during that same year.

A perusal of the above facts brings out the following important points:

1. The increase in visits to the free and part pay clinics was out of proportion to the increase in population since 1922. In the last ten years the visits to the Community Fund Clinics increased 250 per cent while the population increased approximately 62 per cent. In 1931 approximately 18% of the total population of Greater Detroit sought medical aid in all the Detroit free and part pay clinics.
2. The cost per visit to the paying patients (in the

**Since costs for some clinics cannot be separated from hospital and other costs, this estimate has been made by applying the average cost per visit derived from the actual cost figures for the six clinics above (for the years 1928, 1929, 1930 and 1931), which represent 74 per cent of the total number of visits in all Community Fund Clinics. The above estimate does not include the costs of operating the City Clinics.

†"Visit" as interpreted in this study refers to any visit to a physician, consultant, X-ray department, laboratory, electrocardiogram or basal metabolism department, etc. The cost of the visit, therefore, includes the cost of these consultations and examinations.

Community Fund clinics) has increased since 1928 (from 68 cents to 82 cents) but the proportion of paying patients to these clinics has rapidly decreased (from 60.2% to 28.0% of the total visits).

3. The total annual cost of operating all of the clinics financed by the Community Fund ranges from $450,000.00 to $500,000.00. This does not include interest on capital investment, depreciation of buildings, furnishing and equipment; nor does it include the cost of operating the public clinics. Towards the annual operating expenses of the Community Fund Clinics, *i.e.*, $450,000.00 to $500,000.00, the Community Fund appropriates annually from $310,000.00 to $360,000.00 and the part pay patients pay in small fees annually from $110,000.00 to $150,000.00.
4. The amount of free medical service being rendered to the community by doctors when viewed in terms of clinic visits totaled more than 500,000 for the year 1931. Many of these physicians are specialists in their respective fields and on the basis of $1.00 per visit for their services in clinics, the doctors contributed in terms of money free medical service valued at more than $500,000.00 during 1931. This does not include the free medical and surgical services rendered by these doctors to those clinic patients who were confined in hospitals during the same year.

INTESTINAL OBSTRUCTION DUE TO IMPACTED GALL STONE

CASE REPORT

JOSEPH JOHNS, M.D.†
IONIA, MICHIGAN

In cases of acute intestinal obstruction, impacted gall stones are too seldom considered as an etiological factor. The first case was recorded in medical literature by Bartholin in 1654. Wagner collected from the records 334 cases in 1914.

The mechanism by which the gall stone reaches the intestinal tract is through enlarged cystic or common duct, perforation within the adhesions which are formed between gall bladder or ducts and the surrounding viscera. This perforation may occur without any alarming symptoms; however, the patient will give history of chronic cholecystitis or cholelithiasis. Some of these patients are cured spontaneously by the passage of the stone. In Wagner's series 93 passed the stone by rectum, 82 died without operation, and 159 were operated on.

CASE REPORT

F. M. H., No. 172, aged eighty-two. Clinical Course: The patient states that during the past two or three years he had occasional mild attacks of abdominal distress from one to two hours after meals, accompanied by belching of gas, but no nausea or vomiting. Eight months previous to admission he had one transient attack of sharp knife-like pain in the right upper quadrant of the abdomen, accompanied by nausea and vomiting. He never had fever nor jaundice, nor bloody, tarry or clay-colored stools.

Two weeks before admission he had an attack of indigestion, characterized by general abdominal pain, nausea and vomiting, which lasted three days. This was followed by anorexia and belching of quantities of gas. A day before the admission the patient was suddenly seized with severe epigastric pain and vomiting. The pain was cramp-like in character, and recurred every few minutes until he entered the hospital. At the first the vomitus consisted of recently eaten food, but later changed to a brownish watery fluid with a foul odor. In spite of many enemata he passed no fecal material but a small amount of flatus.

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Physical Examination.—The patient was a moderately obese and well preserved, elderly man, lying in bed in some discomfort, the face slightly flushed. The mucous membranes were very dry and the tongue was coated. The abdomen was somewhat distended but showed no peristalsis or localized swelling. On palpation there was a diffused tenderness, most marked around and just above the umbilicus. No masses were palpable. Some spasm of the abdominal musculature detected on the right lower quadrant. On percussion elicited dullness in the right lower abdomen, but no shifting dullness of fluid wave found. Mild general arteriosclerosis and well marked chronic myocarditis. On admission the patient's temperature was 98.3 degrees, pulse 102, respiration 25. Leukocyte count was 8,300.

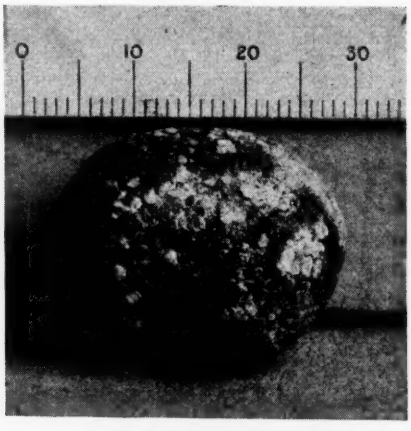

Fig. 1. Stone removed at operation. Measurement in millimeters.

Hemoglobin 87 per cent. Blood pressure 140/90. The urine was normal except for the presence of indican. The patient continuously refused X-ray examination and gastric analysis.

Pre-operative Diagnosis: Acute intestinal obstruction of unknown cause, possibly a malignant growth.

Operation: May 29, 1929, under local anesthesia, incision was made in the lower mid-abdomen. When the peritoneum was opened a small amount of straw-colored fluid escaped. A distended small bowel presented itself in the wound. In the right iliac fossa, a large gall stone was found impacted in the terminal ileum, four inches above the ileocecal valve and the proximal ileum was considerably dilated. After isolating the loop containing the stone, the enterostomy clamps were applied above and below. The stone 25-19 millimeters was removed through a longitudinal incision, directly over it. The rent was closed by a continuous suture. The rest of the abdomen was not explored. Closure was carried out in the usual manner without drainage. The patient received 1300 c.c. of 1 per cent salt solution by hypodermoclysis before the operation. Post-operative course: temperature, pulse, and respiration were slightly elevated on the second day, but returned to normal on the third day. On the fourth day the bowels moved voluntarily. The wound healed per primam. On the fourteenth post-operative day the patient had an attack of heart failure and died in a few hours. No autopsy was permitted.

SOME NOTES ON SICKNESS INSURANCE IN GERMANY, 1932

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In recent years there has been an ever growing interest in economic problems, international, industrial and social. It seems likely that many social and economic changes are imminent or in the process of rapid evolution. The problems concerned in the care of the sick are intimately related to the prevailing economic and social concepts. The increasing agitation for a change in the medical practice in the United States makes an examination of systems that have developed in foreign countries of definite significance. In considering alterations in the present system, it is well to consider where others have succeeded or failed. These few observations which I offer have been gained from some published expressions of medical opinion in Germany as well as from conversations and otherwise informal expressions of persons in Würzburg. To this is added what might be drawn from an observation of the type of patients who appear on the wards of a large university hospital.

At the outset it is perhaps well to recognize certain fundamental differences between medical life in the United States and Germany aside from sickness insurance. In Germany there is no charity on a large scale such as we know it in America. There is giving of money for the care of the poor, to be sure, but it occurs on a small scale and the poor are not primarily dependent on the generosity of the rich. There are comparatively few people in Germany who could afford charity on a financial scale such as we know it in America. Related to this is the almost complete lack of endowments for institutions raised by private subscription. Hospitals are almost entirely owned by the State. Furthermore, they are entirely self-supporting or even have an income considerably greater than expenses in prosperous years. Occasionally there is a hospital, such as the large Julius Spital here in Würzburg, which is supported by the Church and the large industry pertaining thereto. Thus, without privately endowed hospitals or hospitals operated at the expense of the government and without large charitable donations the poor must in some other way be cared for in case of illness.

For fifty years or more it has been obligatory in Germany for all people with incomes below a certain fixed sum to contribute a portion of that income toward sickness insurance. Since its beginning, and particularly since the war, the insurance system has been greatly extended to include unemployment, workmen's compensation, etc., and a great variety of insurance companies have arisen. These companies are strictly controlled by the government and all operations are closely guarded by an elaborate system of law, much after the manner of our life insurance companies, I suppose. The insurance company is not owned by the State and is operated for the mutual benefit of its members. In addition to the obligatory sickness insurance there is voluntary insurance as well offered by other companies by regular payment of a fixed charge. The in-

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dividual who is insured has the choice of any physician whom he may wish to consult who is approved by his insurance company.

Concerning the extent of sickness insurance in Germany, in 1926, it was estimated that there were twenty million people with sickness insurance and that if families and other dependents were included probably two-thirds of the total population were cared for by some form of sickness insurance. Of the practicing physicians it has been said that about ninety per cent are involved in insurance practice. *Probably many others are awaiting the approval of some insurance company.* Fees are, of course, fixed by law. For this purpose there is a carefully itemized tariff list prescribing fees for office examinations, house calls, blood pressure measurements, blood counts, urine examinations, pelvic examinations, etc. These examinations are made according to the practitioner's discretion and for them he receives prompt payment from the insurance company. The fees at first glance seem extraordinarily small, ten kronen or about thirty cents in Czechoslovakia for an office visit. In Germany the corresponding fee is about two marks or fifty cents. It is to be rememebered, however, that for one thing fees are not strictly comparable with those in America and for another that the German physician is at least certain of his fee and that this can be greatly augmented by further office or house visits and by a number of blood pressure determinations and blood counts as may or may not be strictly indicated.

The success of the system of sickness insurance is admittedly largely dependent upon the good will, coöperation and integrity of physicians and patients concerned. The most elaboraate system of law and regulation can not produce justice when this is lacking. That it is frequently lacking on the part of physicians as well as patients is not to be denied. For some this gives rise to frequent expressions of indignation and agitation for change in the medical weeklies, while others accept the situation much as New York and Chicago accept the graft of political machinery as inevitable or at least as a choice of evils.

One of the most frequent questions asked by those driven to print is "What is disease?" When we realize the difficulties and possibilities involved in this question for the relatively small field of workmen's compensation in the United States, we begin to understand the hopelessness of the problem when applied to the whole field of medicine and surgery. To judge the working ability of one who is being paid while sick must ever be so elusive and difficult a problem as to defy all legal verbiage.

It is generally agreed that there are too many doctors in Germany for the population, although the ratio at the present time is not nearly so large as in the United States. An attempt has been made to control this by prolonging the period of hospital work before one is allowed to enter private practice. A movement is now on foot which would require a year of labor at low pay in behalf of the government before the student is allowed to even enter upon his medical studies with the hope of discouraging those who would be so easily discouraged by such a period and who would then enter some more promptly remunerative form of activity.

Some protection is offered the established practitioner by the limit which is placed on the number of approved physicians in a given area by each insurance company. However, the arrangement is not entirely satisfactory for frequent articles appear in the press pointing to the injustice of the Kassen Löwen. These Kassen Löwen, or perhaps, as we should say, the hogs of the insurance business, contrive, not by virtue of their professional ability but through undue influence with the insurance company, to secure more practice than they are entitled to or can adequately handle. It is proposed now to fix definitely either the income or the number of patients for each doctor to circumvent this evil. Apparently it is not uncommon that he multiplies his visits and examinations to a number that he would not consider if he were obtaining his fee directly from the patient. We have on the ward at the present time a man with comparatively mild and uncomplicated diabetes who for a number of weeks has been visited daily in his home by his physician for the purpose of receiving a small insulin injection. To correct gross evils of this kind, however, the insurance companies employ so-called Vertrauenaerzte or doctors who work in the interests of the insurance company and whose duty it is to investigate cases where the patient is receiving more professional care than may be properly indicated. Thus the practitioner works under the threat of being disapproved by insurance companies.

The extent and variety of therapeutic means which the physician may recommend is carefully defined and the drugs he prescribes must be from the approved list.

Not long after the war, in a letter to Graham Lusk, Max Rubner deplored the conditions of medical practice in Germany and stated that there were three times too many sick under the insurance system of practice. Though the actual figure is probably not quite so large, statistics do indicate that the number of persons seeking medical help is much larger than in countries where sickness insurance does not exist. Certainly this does not indicate an actual increase in morbidity. It is perhaps only human that one who pays insurance should feel he must at some time or other get some return for his money and so without entirely adequate pretext he consults a physician who may or may not recommend a week in bed at the expense of the unemployment as well as sickness insurance companies. Many doubtless welcome an easy practice of this sort while others, more conscientious, complain bitterly of seeing thirty or more people a day, none of whom are really sick. In 1928 and 1929 there was a great deal of this. The hospitals were more than filled to capacity with patients classed largely as psychoneurotic, and earned handsome sums for the State. Now, however, with the increasing number of unemployed a halt has been called and probably many who need hospital care are denied it. The hospitals are poorly occupied and are operated at a deficit. Furthermore, in the last year or two it has been required that each person seeking medicines or professional advice must obtain a receipt at a small fee. This has done much to curb the activities of the would-be invalids.

There is little doubt that an insurance system with its legal intricacies and opportunities for unfair exploitation and with the vast organization which is necessary for its control is more expensive for the community than a system in which the relations between the patient and practitioner are direct. One has only to observe the difficulties and expense involved in the case of injured workmen in the United States. Then is one hesitant about the advisability of extending a similar system to include all forms of medical practice. One German writer says of the system in his country, "Insurance dishonesty is widespread, extends even to self mutilation and infects everything that comes within its range. This will remain until the wings of the communistic angels begin to sprout between the shoulder blades." If this is true in a country with such solidarity as Germany has, how much more true would it be in some other countries where such solidarity does not obtain.

MEDICAL PARTICIPATION—THE ANSWER*

L. O. GEIB, M.D.†
Chairman Detroit Board of Health
DETROIT, MICHIGAN

Lay, as well as medical, periodicals have been filled of late with all kinds of prescriptions for the amelioration of the relationship between the medical profession and the public. Unwarranted abuse has been showered upon organized medicine and impractical plans have been proposed for the socialization of both preventive and curative practice.

In the meantime there has slowly evolved in Michigan, without any spectacular or fanfare propaganda, a plan of medical participation which involves replacing an important part of the health program in the hand of the family physician who becomes a co-operating unit and the foundation stone of a new structure in disease prevention which will contribute materially to the reduction of needless sickness and prevent premature death. At the same time this program involves a group plan, the group in this case being the Medical Society which initiates, controls and directs, through suitable committees, the progress of the enterprise. Every physician should become a practitioner of preventive as well as curative medicine and assume his logical rôle in providing ef-

*Medical participation in public health work was discussed at a meeting of the Committee on Preventive Medicine of the Michigan State Medical Society held in Detroit on Dec. 16, 1932. The Committee members present were: C. T. Ekelund, Pontiac; Roy Holmes, Muskegon; Stuart Pritchard, Battle Creek; J. J. O'Meara, Jackson; D. R. Keyport, Grayling; L. F. Foster, Bay City; F. B. Miner, Flint, and L. O. Geib (Chairman), Detroit. Guests included: J. M. Robb, H. R. Carstens, A. S. Brunk, B. U. Estabrook, W. A. Evans, Wm. Burns and Henry F. Vaughan, of Detroit; C. A. Neafie of Pontiac and J. D. Bruce of Ann Arbor.

†Dr. Ledru O. Geib received his A.B. degree Macalester College, St. Paul, Minn., 1905; M.D., Detroit College of Medicine, 1912; post graduate courses at Michigan, Columbia and Harvard Universities. He was Associate Professor of Physiology, Detroit College of Medicine, 1912-1913; Chief of Out-Patient Department and Instructor in Physical Diagnosis, Medical Department of Lincoln Memorial University, Knoxville, Tenn., 1913-1914; Diagnostician, Detroit Board of Health, 1915-1926. He has been a member of Detroit Board of Health since 1929 and has been in general practice in Detroit since 1914.

ficient and adequate medical service to the community.

Material contributions have been made throughout the country during the past two decades to the reduction of death rates and the elimination of preventable diseases. It is relatively easy to show spectacular progress when we start with a high death rate and a high degree of public ignorance with respect to preventive medicine. As the mortality figures diminish it becomes increasingly more difficult to show large savings in human life. Success in the future will depend largely upon our ability to incorporate into the program the services of the family physician, who, after all, is the family counsellor in matters of health and sickness. If the growing child, the suspicious case of tuberculosis or the individual who is handicapped with physical defects or other departures from normal health is to be adequately served, we must have a medical profession which is thoroughly prepared to render modern health conservation services and we must have a public consciousness aroused to an appreciation of the value of the life-promoting facilities that science and the laboratory have made available.

By serving the well individual, the family physician is better prepared to render adequate service to the individual whose physical condition departs from the normal. More than 80 per cent of illness can be cared for by the family physician, who sees the patient in the early stages of illness, when steps must be taken to arrest disease in its incipiency. If we are to continue progress in the reduction of the tuberculosis death rate, there must be an earlier recognition of beginning symptoms. Three-fourths of the cases which now come to the attention of the average health department are moderately or far advanced. The average period of hospitalization for an advanced case is sixteen months, for an early case nine months. By finding the early case, the burdensome cost of hospitalization to the community could be cut in half. Even under the best hospital and sanitarium conditions, with adequate medical and surgical facilities, the life of the advanced case is prolonged but for a few years, while prompt treatment for the early case should result in complete recovery and the fulfillment of the normal life span. There is then no question but that the early diagnosis of tuberculosis would result in a reduction of cost to the community health service and would be a blessing to the patient. The most promising method of consummating a plan for early diagnosis is to prepare the family physician so that he will have the inclination, ability and tools with which to render a modern diagnostic service and at the same time to impress upon the public mind the need for a periodic health examination. An adequate examination for early tuberculosis involves an X-ray examination of the chest and if the physician is not equipped to render this service himself, he should seek the aid of the specialist and have the privilege of referring the indigent to a hospital or health department service.

The death rates from certain diseases of middle age and late life are increasing. If we are to prevent needless mortality in cancer, the family physician must be shown his responsibility, must be thoroughly conversant with the early symptoms of this disease and must appreciate the valuable help of the expert, the laboratory, the roentgenologist and the hospital so that he may fall back upon these diagnostic and treatment facilities when necessary.

If diphtheria is to be prevented, we must secure a high degree of protection for young children, especially those of preschool age and infants beyond the age of six months. If communities are to be kept free of smallpox, its people must be vaccinated. If we are to prevent the inroad of physical and mental handicaps, we must provide machinery for the periodic health examination.

During the past two years the principles of medical participation have been employed by the W. K. Kellogg Foundation in its health program in certain parts of southwestern Michigan, including Barry, Allegan, Kalamazoo and Calhoun Counties. While encouraging and supporting the development of well organized community health departments, this Foundation has used with increasing effectiveness the local practicing physicians and dentists in carrying on its program of health education, supervision of the children of school and preschool age and in creating facilities with which to control such diseases as tuberculosis, diphtheria and smallpox. The W. K. Kellogg Foundation has also been instrumental in stimulating interest in this plan in various parts of the United States. The

program has been described at the annual meetings of the American Medical Association and the American Public Health Association and has been received with unusual enthusiasm by a number of medical and public health societies. The W. K. Kellogg Foundation, whose interests are dedicated to the advancement of the health and welfare of all children, has adopted as one of its major projects the expansion of the influence of the family physician, feeling that by so doing it is best serving child health.

Some six years ago the Wayne County Medical Society, in coöperation with the Detroit Department of Health, embarked upon such a program of medical participation with the purpose that the family physician (who in this plan has become a cooperating physician) should perform certain services which in the past have been rendered largely by free clinics. From the very beginning it was planned to extend this program, insofar as possible, to medical services of a preventable character and it was hoped that the underlying principles would be equally applicable to curative medicine. Instead of starting a revolution it was wisely decided that the process would be one of evolution. Instead of closing all of the free clinics, the work was first limited to a diphtheria protection program and during the past four years there has been no free clinic in Detroit to which the child could be taken for prophylactic treatment. All of the work has been accomplished in the office of the cooperating physician. A recent city-wide survey indicates that over 77 per cent of the school children, 43 per cent of the preschool group and 25 per cent of infants between six and twelve months of age have received at least one series of the immunizing agent. Eleven hundred physicians have coöperated and in accordance with an agreement with the Medical Society and the Department of Health have either been paid by the parent or reimbursed by the Health Department for service to indigents. The diphtheria death rate in 1932 is but 60 per cent of that for the preceding year and but one-fifth of the average for the preceding five-year period. The program has served the public by reducing the amount of sickness and has served both the public and the Health Department by reducing the cost of the disease. The entire preventive program, including the sums paid to physicians, has in no year even approximated the previous cost to the community of treating those who suffered from diphtheria. During the past three years the physicians of this community have been deprived of an income of $60,000.00 due to the reduction in diphtheria mortality but at the same time they have been paid more than $300,000.00 for the protective service which they have rendered by the administration of toxin-antitoxin or toxoid. Thus it will be seen that preventive medicine has paid the physician five times his income from curative medicine for this one disease. There has been maintained that intimate and cordial relationship between the patient and physician. The success of such a program of medical participation depends: first, upon an alert medical profession which is willing to take the lead through its properly organized county society; secondly, the existence of a full-time public health service with well trained personnel including public health nurse-educators; thirdly, the coöperation of all existing health agencies, whether public or voluntary, and, fourthly, a stimulated and responsive public. It is essential that the physician should first be prepared to render the service. This can be accomplished by group control through the medical society and its committees, through a system of undergraduate and post-graduate instruction and through the employment of a medical coordinator who will visit those physicians who are wont never to attend any medical meeting. If the medical profession is not fully conversant with the plan, only failure will result. The second important step is to prepare the public. This may be accomplished through all the known means of popular health instruction, coupled with individual instruction to the parent through the medium of the public health nurse-educator.

So far as diphtheria protection is concerned, the Detroit Plan has been a marked success. The work is gradually being extended so as to include smallpox protection, tuberculosis case-finding, periodic health examinations, periodic dental examinations, the control and treatment of venereal diseases and the annual physical examination for food handlers. It is intended to extend this plan gradually to other phases of preventive and curative medicine. In the words of the Weekly Roster of the Philadelphia

County Medical Society: "The advantages of this plan are obvious. Free clinics are eliminated the status of the family physician is established, a large group being able to do more work than a small one, and the efficiency of the medical care is increased. More work is done in a shorter period. The cost is more equitably distributed. A more enduring relationship is developed and sustained between the profession, the public and the health department."

It is the hope of your committee that this type of service may be extended into other communities and that the physician will embrace in his practice many of the features of a preventive medical program which have formerly been available only through health department organization and clinics. The committee further believes that the principles involved in this program are applicable to a plan which will assure adequate medical care for a community.

It is urged: (1) that each county medical society study the plan of medical participation as it has been instituted in the southwestern part of Michigan by the W. K. Kellogg Foundation and in Detroit by the Wayne County Medical Society in cooperation with the Health Department; (2) that such steps as are necessary be taken to extend this type of service to other counties in Michigan and (3) that the county medical societies secure the coöperation of local public officials in providing community health service and appropriate funds to maintain a program which will utilize to the utmost the facilities and resources of the medical profession in providing adequate preventive and curative service to the public.

MICHIGAN DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

COMMUNICABLE DISEASES IN 1932

In spite of the fact that there was an increase of almost 40,000 cases of communicable disease reported in 1932, this year was the most remarkable year in many ways in the history of the state. The increase in the total number of cases reported was 39,604, of which 35,917 was due to measles alone, and 4,124 due to mumps. In other words, the increase in these two diseases more than offset the total increase in the number of cases reported.

Diphtheria in 1931 was considered phenomenal. There were 1,831 cases reported in 1931 as compared with 12,075 in the peak year of 1921, yet in 1932 this figure was reduced to 1,188, a decrease of about one-third from the 1931 figure. This is certainly remarkable in this state, which has always been noted for the high incidence of this disease. I may say, however, that this reduction in diphtheria has not been entirely peculiar to Michigan, as most of the states show some degree of decrease.

Scarlet fever on the other hand shows an increase from 13,023 cases in 1931 to 15,255 in 1932. This is a gain of approximately seventeen per cent.

Smallpox continues its downward course, there being only 222 cases reported in 1932 as compared with 915 in 1931, a decrease of 693.

Typhoid fever shows an increase of 89 cases, rising from 424 in 1931 to 513 in 1932. It is entirely probable that at least a percentage of this apparent increase is due to better reporting, as the department has been very keenly on the alert to discover cases. When the fatality rates are ready, in the course of another month, we will be better able to judge whether or not this increase is real, as the fatality rate is fairly constant in typhoid fever and may be used as a measure of the efficiency of reporting.

Whooping cough showed a considerable increase, rising from 11,448 cases in 1931 to 13,091 in 1932. This is an increase of approximately 14 per cent.

Measles, probably more than any other communicable disease, shows a definite and marked periodicity, and 1932 was certainly a high year. There were 42,129 cases reported, more than have ever been reported in any one year in the history of the state. This, as compared with 6.212 cases reported in 1931, an increase of 35,917 cases.

There were 4,904 cases of pneumonia reported, as compared with 4,661 in 1931, an increase of 243 cases. As this disease is very poorly reported except in times of peculiar stress, it is probable that these figures are not significant.

Meningitis showed a decrease from 293 cases in 1931 to 129 in 1932, a drop of 164 cases.

It will be recalled that the year 1931 was an epidemic year in poliomyelitis. There were 1,137 cases reported in 1931, whereas, in 1932 only 112 cases were reported.

Chickenpox rose from 11,531 cases in 1931 to 12,122 cases in 1932, an increase of 591 cases.

Mumps showed a decided rise, there being 9,403 cases reported in 1932 as against 5,279 in 1931, an increase of 4,124 cases.

Ankylostomiasis (Hookworm disease) is not common in Michigan, but there was one case reported in 1932; none in 1931.

Influenza is not reportable in Michigan except in times of epidemic and on orders of the State Commissioner of Health. There are always a few cases reported and in 1932 we had 1,417 cases, compared with 1,337 in 1931.

There were no cases of leprosy reported in Michigan during 1932. One case was reported in 1931.

Lethargic encephalitis showed a slight decrease, there being 47 cases reported, as against 52 in 1931.

It is interesting to review the history of malaria in Michigan. The older records show that it was very common a generation ago, and then for many years it practically disappeared. There were 44 cases reported in 1932 as compared with 13 in 1931. Investigation seems to indicate that a good many of these cases were imported.

There were 16 cases of paratyphoid fever reported in 1932 as compared with 9 in 1931.

Pellagra is by no means common in Michigan, but two cases were reported in 1932 as compared with one in 1931.

The recognition of psittacosis in this country is relatively new. Michigan had one case reported, which ended fatally, and it is interesting to note that a love bird, a member of the psittacine family, was responsible for this infection.

There were two cases of human rabies reported in 1932, the same number as in 1931.

There were 405 cases of septic sore throat reported in 1932 as compared with 325 in 1931, an increase of 80 cases. As the recognition of this disease and its differentiation from scarlet fever is not clearly cut, not too much reliance should be placed on these figures.

Spirochetal hemorrhagic jaundice was not reported in the state during 1932, although there were two cases reported in 1931.

There were ten cases of tetanus reported in 1932, as compared with twelve cases in 1931.

Trachoma showed reports of four cases for 1932 as compared with three in 1931.

Trichiniasis reported two cases in 1932 as compared with seven in 1931.

Tularemia is recognized as a relatively new disease in this state. There were 21 cases reported in 1932 as compared with six in 1931.

The recognition of undulant fever in Michigan is comparatively recent but reports were received for 45 cases in 1932 as compared with 19 in 1931.

Vincent's angina shows some increase for 1932. There were 209 cases reported in 1932 as contrasted with 168 in 1931.

There were 7,103 cases of tuberculosis in 1932, as compared with 6,132 in 1931. In view of the steadily falling fatality rate from this disease, it is probable that this increase is due to better reporting.

All forms of venereal disease showed a decreased number of reports in 1932 as compared with 1931. It is a question whether or not these figures are truly comparable as the change made relatively a few years ago of requiring reports only of communicable cases has tended to reduce the number of cases reported. There were reported 11,969 cases of syphilis in 1932 as compared with 14,662 in 1931. There were reported 6,963 cases of gonorrhea, as compared with 7,843 in 1931, and 140 cases of chancroid as compared with 170 in 1931.

Taken as a whole, I think we may say definitely that the number of cases of communicable disease reported in Michigan in 1932 indicates a very satisfactory condition. The increases are in scarlet fever, measles, mumps and whooping cough, diseases that we are not yet able to control. Those diseases that we do know how to control in a

satisfactory manner have all shown a satisfactory decrease.

W. J. V. D.

EATON COUNTY HEALTH DEPARTMENT

Eaton County is to have a full-time health department, made possible by a grant from the W. K. Kellogg Foundation. The director is Dr. J. W. Davis and headquarters are at Charlotte, the county seat.

The Eaton County Health Department will be the third county unit to be sponsored by the Kellogg Foundation, and it will bring up to thirty the number of Michigan counties having full-time health supervision.

EXERCISE AND GASTRIC DIGESTION

In Beaumont's classic "Experiments and Observations on the Gastric Juice and the Physiology of Digestion," published in 1833, he anticipated a question that is frequently being asked at the present time; namely, What is the effect of exercise on the gastric secretion of man? Is complete rest after meals desirable in the interest of food digestion? From his observations on Alexis St. Martin, the "man with the lid on his stomach," Beaumont drew the inference—one of the fifty-one inferences with which he concluded his essay—that "gentle exercise facilitates the digestion of food." Since that time the possible significance of another physiologic factor—the emotional state of the person—has come into notice. Today it is realized that anxiety, anger, fear and sorrow may either stimulate or inhibit physiologic processes. The views on this subject in relation to the gastric functions have by no means been uniform. As early as 1846, Combe expressed the dual belief that "rest of body and tranquillity of mind for a short time, both before and after eating, are necessary and conducive to healthy digestion."

The possibility of direct experimentation on man awaited the introduction of the gastric tube, by which test samples of the stomach contents after meals could be removed for comparative analysis; for persons with a gastric fistula such as Beaumont's patient possessed are rarities. The latest investigators in this field, working at the University of Wisconsin, recall that in 1928 Campbell, Mitchell and Powell in England studied a series of normal young men who ate, before exercises, a test meal of bread, meat and potatoes, or a modification of the Boas meal of oatmeal gruel. The severity of the exercise to which these young men were subjected was roughly measured and consisted usually of running round the laboratory, the distance varying from one to four miles. They concluded that such exercise delayed digestion but that lighter exercise, walking, had no inhibitory influence on gastric secretion.

According to the observations of Hellebrandt and Miles, gentle exercise before or after a test meal augments gastric acidity. Protracted exercise is not necessarily depressing; but exhaustive muscular exertion, whether it precedes or follows a test meal, is associated with a diminution of the acidity of the gastric secretion to a level below resting normal, and the decrease is greatest when the exercise is accompanied by emotional excitement. In explanation of some of these manifestations the Wisconsin investigators point out that during muscular exercise, especially when violent and carried on at high speed, lactic acid is rapidly produced, accumulates in the blood, lowers the bicarbonate content and accelerates the output of carbon dioxide. The lungs are unable to wash out the carbonic acid rapidly enough and the hydrogen ion concentration rises. In the light of these experimental observations, they add, the diminution in gastric acidity during violent exercise may be due to the concomitant fall in plasma bicarbonate. In accord with this hypothesis, hypoacidity was observed to appear only when the muscular exertion was associated with evidences of the incurrence of an oxygen debt; and the greatest diminution in gastric acidity occurred when the exercise was severe and exhausting. The physicochemical changes in the blood, they conclude, must therefore be taken into consideration in the determination of the cause of the exercise gastric hypoacidity. Furthermore, as Hellebrandt and Miles point out, if the muscular exercise is severe and generalized, splanchnic vasoconstriction diverts blood away from the visceral area to the active skeletal muscles and skin, producing a relative diminution in the oxygen supply to the stomach. This may contribute to the production of the gastric hypo-acidity associated with exhaustive muscular exertion. It may well be, as Hellebrandt and Miles suspect, that moderate muscular exertion heightens the general metabolism, improves the circulation and has a stimulating effect on the organism as a whole, thus augmenting functional activity.—*Journal A. M. A.*

ACCIDENTAL INJURIES IN OFFICE PRACTICE

Richard Kovacs, New York, analyzes the accidents due to the use of therapeutics apparatus in the practice of physical therapy, exclusive of X-rays, and presents the principles the observance of which (1) will prove reasonable knowledge and skill on the part of both general practitioner and specialist and (2) will tend to keep accidental injuries at a minimum. The causes that lead to the occurrence of accidental injuries are: (1) the equation of the operator—improper technic or inattention; (2) the equation of the patient—unusual sensitiveness (or idiosyncrasy, which is particularly true in regard to roentgen rays), lack of coöperation or contributory negligence; (3) the equation of apparatus and accessories—faulty construction or mechanical breakdown. Accidental injuries in the course of office treatment by physical measures are: 1. Electrical shock, due to the sudden powerful influence of an electric current on the entire body; this may be due to *(a)* accidental contact with a grounded object (water pipe, radiator, electrical socket) while receiving an electric current from an apparatus or while receiving a galvanic bath; *(b)* breakdown between the primary and secondary side of a high tension transformer and lack of sufficient safeguards (magnetic cutout) to prevent the jumping over of the dangerous high tension low frequency current to the patient. 2. Burns of varying kind, due either to excessive current density or to excessive heat or ultraviolet radiation over part of the body. Inflammation of the eyes has occurred through neglect of protecting the eyes against ultraviolet rays. 3. Mechanical injuries, tearing of the skin or rupture of internal organs, due to a blow from an improperly supported piece of apparatus or to excessive action of the apparatus itself, as has happened with some mechanical exercisers. The author concludes that the general practitioner and the specialist alike must be acceptably trained and be ever watchful to administer treatments within a large margin of safety so that, whatever accident may occur from time to time, it will belong among the really unavoidable ones.—*Journal A. M. A.*

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MARCH, 1933

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

POST GRADUATE OPPORTUNITIES

Arrangements are practically complete for the Annual Post Graduate work given by the Department of Post Graduate Medicine of the University of Michigan and the Michigan State Medical Society on Medicine and Surgery and Allied Specialties. Courses already announced, concerning which details may be obtained by addressing the Department of Post Graduate Medicine, Ann Arbor, are as follows: Diseases of Metabolism, March 27-31; Pulmonary Tuberculosis, March 20-24; Diseases of the Heart and Circulatory System, April 3-7; Ophthalmology and Otolaryngology, April 24-29. These courses will be given at the University Hospital at Ann Arbor.

The following will be given at the Receiving Hospital, Detroit: Proctology, May 15-27; Gynecology, Obstetrics and Gynecological Pathology, June 19 to July 1. The Fifth Annual Practitioners Course, June 19 to July 1.

The fees for the courses of post graduate study have been lowered to conform with the financial situation with which the profession of the state is confronted.

The short intensive course of study has met with a satisfactory response on the part of the medical profession. After years in practice, physicians have well defined ideas regarding their difficulties and limitations. These graduate courses afford an opportunity for help through discussion. During periods of prosperity many found it possible to get away perhaps farther from home and for longer periods of time. The distant fields that looked so green have been brought to our doors, so that opportunities for intensive study are ours at a fraction of the expense. The character of the courses offered conjointly by the University Department of Post Graduate Medicine is so well known that no more than an announcement of the particular courses with their dates is necessary. However, in former years some of the courses received a greater number of applicants than could be accommodated.

"THE FISTULOUS ALEXIS"

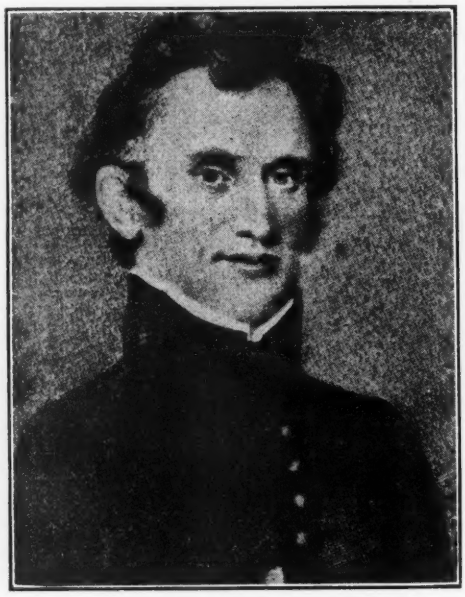
One of the greatest, if not the chief, events of the year in medical circles in Wayne County was the 1933 series of Beaumont lectures given before a crowded house on January 30th and 31st. The lecturer was Dr. W. B. Cannon, professor of physiology, Harvard University Medical School. The lectures this year constituted a commemoration of the one hundredth anniversary of the publication of Beaumont's classic work, Experiments and Observations on the Gastric Juice and the Physiology of Digestion.

The first lecture given under the auspices of the Beaumont Foundation was by Professor Macallum of Johns Hopkins in 1922. It has been followed by a series of lectures

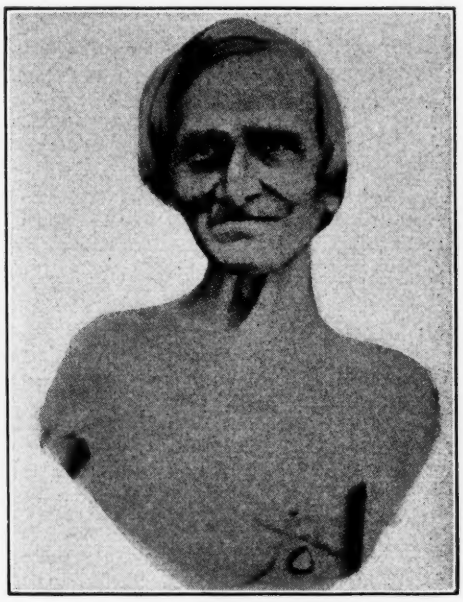
each year by some outstanding research worker in the United States and Canada.

These lectures have been made available during the past and present year to the entire membership of the Michigan State Medical Society, through the medium of this Journal. The first lecture by Professor Cannon appears in this number, and the second and third lectures will be printed in the April and May numbers respectively.

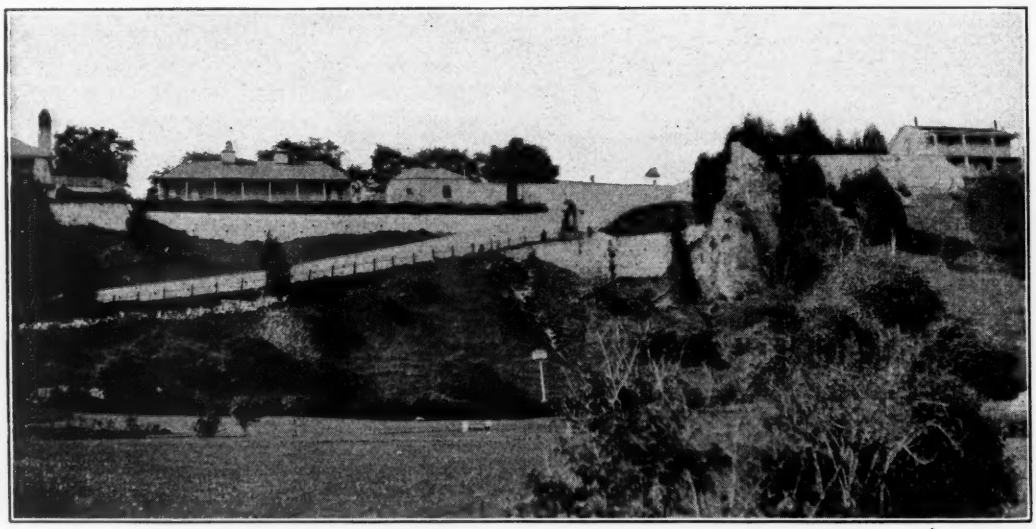
Apropos of the one hundredth anniversary of the publication of Beaumont's book, attention is here called to a very scholarly biographical paper in the Annals of Medical History for January, 1933. The author is William Snow Miller, M.D., Sc.D., of Madison, Wisconsin. The paper is a lecture which was delivered by the author before the Beaumont Club of the Yale Medical School.



WILLIAM BEAUMONT



ALEXIS ST. MARTIN
(Note gastric fistula)



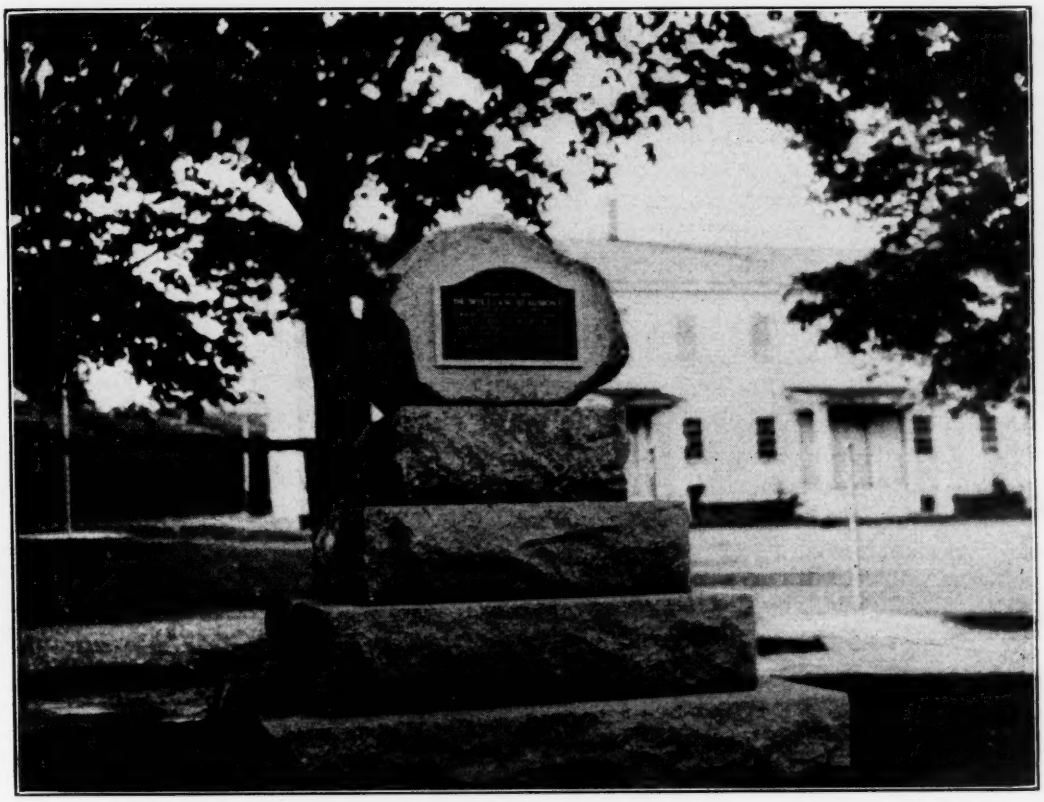
FORT MACKINAC

"Come with me for a few moments on a lovely June day in 1822, to what were then far off northern wilds, to the Island of Mackinac where the waters of Lake Michigan and Lake Huron unite and where stands Fort Mackinac rich in the memories of Indian and voyageur, one of the four important posts on the upper lakes in the days when the rose and the fleur-de-lys strove for the mastery of the western world."—Sir William Osler. (Photo by J. H. Dempster from The Medical History of Michigan.)

Everyone is familiar with the fortuitous accident which befell Alexis St. Martin, a

French Canadian voyageur on Mackinac Island, giving William Beaumont, the army surgeon, the opportunity which brought fame to both patient and doctor. Professor Cannon, as will be seen, made frequent reference to the epoch-making work of the pioneer backwoods physiologist, comparing the findings with the most recent results of physiologic research. The greatness of the pioneer may be appreciated when it is realized that he did his work alone, almost in solitude, without the encouragement of coworkers, without apparatus or with equipment of the most meagre kind, without financial aid and often with the opposition of those who failed to appreciate the importance of the work in hand. Such an environment was Beaumont's, his only instrument a thermometer, some litmus paper, or its substitute, perhaps, and the fistulous Alexis as his experimental animal.

Professor Cannon has a faculty, unfortunately too rare among scientific workers, of presenting his subject in a clear and interesting manner. He is a master of literary style which has been apparent to all who are familiar with his writings and with his early work, The Mechanical Factors of Digestion, to his recently published book, The Wisdom of the Body.



Beaumont's Monument

This monument was erected in 1900 by the Michigan State Medical Society in honor of the labors of William Beaumont. It is located on the hill on which Fort Mackinac is situated. Though carved in granite, the inscription had become so much effaced by the rigors of the northern winters that the stone was faced with a bronze tablet a quarter of a century later, during the annual meeting of the Michigan State Medical Society at Mackinac. The inscription on the tablet is: "Near this spot Dr. William Beaumont, United States Army, made those experiments upon Alexis St. Martin which brought fame to himself and honor to American Medicine." (Photo by J. H. Dempster, which first appeared in the History of Medicine in Michigan.)

X-RAY AND THE DEPRESSION

During the early years of the development of the science of roentgenology, apparatus compared with that of today, was very crude and more skill in proportion was necessary to produce diagnostic plates. The early X-ray worker developed into more or less of an artist. With improvement in the manufacture of X-ray apparatus and the invention of the Coolidge tube the matter of making radiograms was reduced to a mastering of a more or less hard and fast tech-

nic. The operator of modern X-ray equipment can be taught in a week to make excellent radiographs. He has to learn only the necessary manipulations of the keyboard of the control stand, development technic, how to place his patient, and the result is a radiograph equal to the very best made by the expert roentgenologist of thirty years ago. With the good times following the war X-ray apparatus was perfected, and, with a simplified technic, was placed into a great many doctors' offices where no attempt was made to specialize nor to give roentgenography any major consideration. Less emphasis was given to the diagnostic side of X-ray. If not in so many words, the feeling was left with the buyer that once the *modus operandi* of the machine were mastered, the main difficulty had been surmounted. As a prominent roentgenologist once said "the prosperity period has placed more roentgenographic apparatus in hospitals and offices than the profession can assimilate and use intelligently." Waters,* Associate Professor of Roentgenology, Johns Hopkins University, comments "that the distribution of X-ray apparatus far exceeds the distribution of the knowledge of roentgenographic interpretation." "The value of the X-ray examination," Waters contends, "depends entirely upon the amount of interpretative knowledge that is brought to bear upon the shadows."

A display of costly X-ray apparatus is impressive to patients. How often does the roentgenologist hear from the patient the exclamation, "wonderful"! The writer recalls an instance in which a patient used the word in the presence of her physician as expressing her reaction towards the X-ray apparatus. "No," was his reply, "there is nothing wonderful about the making of a radiograph, if there is anything wonderful it is in the interpretation." Roentgenology is a specialty that concerns almost every branch of medicine or surgery in all conditions in which the pathology registers itself in increased or decreased density of the part under consideration. We recall the definition of a radiograph taught by the late Dr. P. M. Hickey years ago. "A radiograph is a record of density." Dr. Hickey objected to the term "X-rav picture," as being wholly misleading. A radiographic examination is really a biopsy without the agony of the scalpel.

Now that the impecunious roentgenologist or physician is not in a position to jettison his equipment and buy new, he can increase his diagnostic ability by making the best use of the apparatus he has.

*See 1932 Year Book on Roentgenology reviewed elsewhere in this Number of the Journal.

WHAT IS SOCIALISM?

The answer is not without interest at the present time considering the activities of the state in various directions including the proposition of the committee on the cost of medical care which in effect would socialize medicine. Apart from the chimeric nature of much of the so-called historic socialism, the first modern English socialist was Thomas Spence, born in 1750, not a long time ago as history goes. The founding of modern socialism, however, is ascribed to a Welshman, Robert Owen (1771-1858). Owen was manager and later a joint proprietor of one of the largest cotton manufacturing establishments in England. He conducted his operations more as philanthropic capitalist than socialist. His socialism dated from 1817, a period that was marked by general misery and commercial stagnation following the battle of Waterloo. Owen claimed that the condition of the times was due to competition of human labor with machinery (a circumstance somewhat analogous to the present), and the proposed remedy was the subordination of machinery. Then, following Owen, we have a lineage of names more or less familiar which in a way points to the country in which socialistic trends have been manifest; such names as, Kingsley (Christiam Socialism), Saint Simon, Fourier (French Socialism), Karl Marx, Lassalle (German Socialism), Bakunin (Russia).

Socialism in its broad sense has been largely confined to the laboring classes. Here and there, however, it has included intellectuals, perhaps more so in the United States during the last presidential election than at any other time, though some of the names associated with European socialism have been of men of high intellectual attainments. Its development has been greatest in European countries and yet there it has been one of degree only. There has never been a completely socialistic state. The

socialistic movement is in process of making, and at that only in a very early stage.

Modern socialism is divided roughly into three phases. The first is the theoretic-Utopian stage of Owen and of the earlier French socialists; the second stage is that of revolutionary socialism, the exponents of which were Marx and Engels as its scientists, and Lenin, Trotsky, Stalin as its greatest practical exponents. The third stage might be called constitutional socialism identified with such names as Lassalle, the first organizer, and Ramsay MacDonald and Sidney Webb long identified with the Fabian society, a group of socialists not in a hurry to witness the fruition of their political theories. Constitutional socialism during the past thirty years has made rather marked advances in Australia, Austria, Belgium, Great Britain, France, Germany and a number of other countries in which socialist parties have acquired rather formidable influence.

Socialism has never acquired any great popularity in the United States. Beyond a few experimental colonies in the 1830's, we do not hear much of the movement until after the wave of German immigration which followed the failure of the 1848 revolution in Europe. A socialist newspaper, The Republic of Workers, was founded in 1858, but was short lived. The typical American seemed to have very little sympathy for the political exiles from Europe. With the exceptions of depressions, somewhat cyclic in nature, wages have been for the most part higher here, than those which prevailed abroad, so that during the past century comparative contentment was inimical to the spread of any political or social system which meant a levelling down. The typical American always felt that though his circumstances may not be what he would desire, the possibilities of acquiring a measure of wealth were never wholly denied him.

Probably as good a definition of socialism* as any is, a system a government where the ownership and management of land, capital and public services are placed under public or social control instead of in the hands of individual capitalists or joint stock companies, "with neither a body to be kicked or a soul to be damned."

*From A History of Socialism by Markham.

Civic control of such public service as water, street lighting and street railway are in a way socialistic. The operation of steam railways in Canada is designated by a special name, collectivism. State control of medicine would be socialism to that extent prevailing under a capitalist system.

At the recent presidential election the socialist candidate for president received the lowest socialistic vote in proportion to the number cast, of any socialist candidate in the last thirty-two years. Considering the fact as already mentioned that socialism is at the very early stage of its development anywhere, we would hesitate as a citizen to see it applied in any broad way to such an important service as medicine. As a physician it would seem like gambling with one's professional career with a possibility of the dice being loaded against one.

"DIED FOLLOWING OPERATION"

This phrase which has appeared with certain modifications from time to time in the daily press has been a source of irritation to a great many of our surgical friends. And rightly so, since the implication has been that the operation killed the patient who would otherwise have lived long and happily. The following is from the versatile and facetious pen of a friend of the medical profession, Malcolm Bingay, editor of the Detroit Free Press. Mr. Bingay has more than made amends, so far as he is able to control the situation editorially.

"A medical friend of mine called my attention to a grave mistake very frequently made in all newspaper offices. (No pun intended on 'grave mistake'). Very often the thoughtless reporter or copy reader will say that somebody 'died from an operation.' It is part of the colloquial speech of people in all walks of life—outside the medical.

"To say that a person 'died from an operation,' is to imply one of two things: either the doctor was guilty of malpractice or murder. People die while undergoing an operation in an attempt to save their lives. That is the kindlier and more accurate way of saying it.

"No doctor or surgeon of any intelligence or standing in his profession suggests an operation—major—unless he feels that it must be performed either to save the life or make life bearable to the patient. Contrary to the cynically uninformed, surgeons are not sadists; they find no joy in cutting. They perform miracles of mercy and when, in a battle against Death, the old Grin Reaper happens to win, it is unfair and lacking in sportsmanship to say or write that the patient 'died from an operation.'"

DIGITALIS AND HEART DISEASE

In a short article* Dr. Christian has given an admirable review of the pharmacology of digitalis, and some interesting suggestions as to the use of the drug in other conditions than cardiac decompensation with or without an associated auricular fibrillation.

The active principles of digitalis are glucosides which are absorbed and fixed in the heart muscle and then split into a form that has a digitalis action, and an inert sugar. This splitting is gradual and is associated with a diminishing amount of available active digitalis substance over a long period of time. This feature of the pharmacological action of the drug indicates the need of subsequent doses at proper intervals to maintain the digitalis action in patients over days or weeks. Should the doses follow each other at too short intervals, the amount of digitalis fixed in the heart muscle will increase until a toxic level is reached, giving the so-called cumulative effect of digitalis.

The amount of digitalis fixed by any heart depends on several factors, most important of which are the concentration of the drug in the coronary circulation and the cardiac cavities, the rate of flow, and the mass of heart muscle. These observations explain certain well known clinical facts.

Digitalis given to a patient with a normal heart has much less effect than when the same amount is given to a decompensated patient. In the latter case the coronary as well as the peripheral circulation is definitely slowed and the emptying of the coronary vessels is retarded, prolonging the time of contact between the digitalis in the circulation and the heart muscle. Thus more digitalis is fixed and a greater digitalis effect is obtained from a given dose of digitalis in decompensation than when compensation is regained, ventricular contraction more vigorous, and the rate of flow more rapid.

In the hypertrophied heart with greater muscle mass, concentration and time of flow remaining the same, more digitalis will be fixed than by the heart of normal size, giving us proportionately more effect from a given dose of digitalis in the enlarged heart.

At this point the author speculates on the use of digitalis in middle aged or elderly people with beginning hypertrophy or in whom enlargement can be predicted due to the presence of hypertension or valvular lesion. Hypertrophy in itself he believes to be an undesirable process. Cloetta's experiments on animals with experimental aortic insufficiency showed that those receiving digitalis developed less hypertrophy than those receiving none. This work suggests that digitalis may retard cardiac hypertrophy. On this basis, Christian recommends the daily use of digitalis especially in older people where there is hypertrophy even though no symptoms are present. This may be continued during the remainder of the patient's life.

Once decompensation has developed, best results are obtained from a daily digitalis ration maintained continuously thereafter.

The dosage of digitalis varies little regardless of the method of injection. If the intravenous route is chosen the digitalis passes through the lungs, which fix no digitalis, directly to the heart. If digitalis is given by mouth or rectally, it is absorbed and passes into the portal circulation on its way to the heart. Much of the drug is fixed by the liver, reducing the amount that reaches the heart, suggesting that the dosage should be greater if given by mouth or rectum. However, when digitalis is given by the latter methods, due to prolonged absorption time, it remains in the circulation a much longer time, and this factor compensates for the amount absorbed by the liver. Thus there needs to be no great difference in dosage regardless of the method of administration.

Dr. Christian concludes with the statement that for mouth dosage no digitalis preparation is better than pills of powdered leaves, judged either on the basis of clinical experience or pharmacologic investigation.

*The Pharmacology of Digitalis in Relation to the Therapy of Heart Disease. Henry A. Christian, M.D. The New England Journal of Medicine, Jan. 12, 1933, Volume 208, No. 2, p. 66.

COMMON DISEASES

"Scottish medicine had a nomenclature of its own for the commoner diseases. This is well exemplified in the description, given by a school girl, of the diseases from which she had already suffered, as mentioned by Dean Ramsay in illustration of Scottish expressions. He says:

"'In 1775, Mrs. Betty Muirhead kept a boarding-school for young ladies in the Trongate of Glasgow, near the Tron steeple. A girl on her arrival was asked whether she had had smallpox. She answered, "Yes, mem, I've had the sma-pox, the nirls (measles),

the blabs (nettle-rash), the scaw (itch), the kink-hoast (whooping cough), and the fever, the branks (mumps), and the worm (toothache)."'"

—From *History of Scottish Medicine,*
by John D. Comrie, M.A., B.Sc., M.D.

THE POWER TO TAX IS THE POWER TO DESTROY

(Saturday Evening Post)

"It would be less of a shock to have our pockets picked by an expert than to be held up at the point of a gun, but the end result would not be very different. However unpleasant pain may be, it has its uses. It is the one danger signal all living things will heed. Some of the most malignant diseases have a painless onset and the victim has no warning until it is too late for him to hope for more than a fighting chance. So with much taxation, that piles up softly and silently, like snow in the night. We laugh at it because we assume that it is borne by those who can better afford it than ourselves. We are slow to think the matter through and to discover that these levies are passed on to us in higher rents, dearer food, clothing, transportation and other living costs.

"If some white-rabbit breeder in Congress should propose that all existing taxes be abolished and that in place of them, each and all of us should work for the government two days out of every week, or turn over one-third of our incomes for the use of government, even his most radical colleagues would tap their temples and telephone for a specialist in mental disorders. Such heavy taxation in a nation not at war is almost unthinkable; and yet, if we are to believe one of our leading bank presidents, 'Today, government, in the form of taxes, will take, it is estimated, in excess of one-third of the national income, or financial lifeblood of the people.' If we had more courage and wisdom, we should make all our taxes as direct and as painful as possible, for no other course would serve so quickly to abate them."

WIND

Noo, th' wind blaws east an' th' wind blaws west,
Bit th' wind frae th' sooth is th' wind wha's best,
An' th' wind wha blaws frae th' north o' th' toon,
Is th' wind we'd raither no stay aroon'.

We hae wind wha is saft an' wind wha is cauld,
An' wind wha sweeps aff th' hat frae th' bald,
An' wind wha gaithers th' leaves in oor yard,
An' th' wind wha brings rain is doon on th' card.

Th' March wind isna a wind that can boast
O' mony guid freens aroon oor auld coast,
Bit th' wind wha blaws warm in April's mid-day
Is th' wind we'd rather gi's a lang stay.

Weel, March is a month that is naturally tough,
Th' wind may blaw rain or th' wind may blaw rough,
Bit April an' May is noo verra near
An' th' wind blaws warm when springtime is here.

Weel, guid nicht tae ye a',

WEELUM.

Great changes are not caused by ideas alone; but they are not effected without ideas. The passions of men must be aroused if the frost of custom is to be broken or the chains of authority burst; but passion of itself is blind and its world is chaotic. To be effective men must act together, and to act together they must have a common understanding and a common object. When it comes to be a question of any far-reaching change, they must not merely conceive their own immediate end with clearness. They must convert others, they must communicate sympathy and win over the unconvinced. Upon the whole, they must show that their object is possible, that is is compatible with existing institutions, or at any rate with some workable form of social life.—From Liberalism by L. T. Hobhouse.

MA BACK YARD POOL

We built a wee bit back yard pool,
Aneath th' trees where 'twould be cool,
We filled it fu' o' lilies white,
That fold their wings when it is nicht.

Oor freens pit tadpoles in oor pond,
An' gold fish too (o' which a'm fond),
An' tadpoles grew, mosquitoes too,
An' bugs an' flies made much ado.

Bit tadpoles intil frogs did grow,
An' every rain increased th' floe
Till noo, we're feedin' verra weel.
On auld frogs legs, fried wi' oatmeal.

Guid nicht,

WEELUM.

TEA-DRINKERS

(Manchester Guardian)

In this country (England) life without tea would be unthinkable—an obvious enough reflection which is renewed by references to our eminence as tea-drinkers in a pamphlet on "Plantation Crops" which is issued by the Empire Marketing Board. As importers of tea we are supreme among the nations of the world; we now consume annually between nine and ten pounds of tea per head of population as compared with six and one-half pounds about twenty years ago. The United States is also a large importer of tea, but only because it represents a large population; the consumption per head is far below ours. The new pamphlet shows that the United Kingdom drinks six times as much tea as it drinks coffee, while the United States drinks sixteen times as much coffee as tea. It would be folly to argue that the English drink tea because they know how to make it and spurn coffee because (as critics from other countries often assert) they only succeed in spoiling it. That would be to put the cart before the horse, for if the English wanted to drink coffee they would soon learn how to prepare it acceptably. As a matter of fact they do drink coffee extensively, as is shown by the quoted figures of one cup of coffee to six of tea. If we bear in mind the amount of tea which is drunk, that indicates a considerable consumption of the other beverage, and it may be observed that the old legend that we do not know how to make good coffee is really a fable which belongs to the past. It is probably true, however, that coffee makes its headway among the middle and upper classes. The manual workers are still faithful to their Indian tea, served hot, strong, and highly sweetened. It may not be a delicate potation but it is undeniably popular and serves for morning, noon, and night.

OBITUARY

DR. H. M. GALE

Dr. H. M. Gale died at his home in Bay City of angina pectoris after a medical career of half a century. He was born in Ontario on November 1, 1855. After a preliminary education in the schools of his native Province he attended McGill University, where he studied under the late Sir William Osler. After graduating from McGill he began practice in Bad Axe, but moved to Bay City in 1885. Dr. Gale was a member of the Bay County Medical Society, the Michigan State Medical Society and the American Medical Association. He is survived by his widow; a son, Dr. E. M. Gale, of Shanghai, China; an adopted daughter, Mrs. James P. Carney, of Portland, Oregon; and three brothers, Dr. James Gale, of Bath, England, John Gale, of Washington, and the Reverend Robert Gale, of Bayfield, Ontario.

COMMUNICATIONS

Feb. 10, 1933

Dear Doctor Dempster:

I noted in Comments column: "It is reported that there is a good opening at Ontonagon for a general practitioner." I do not know who furnished the information, but it was some one who knew nothing of the facts. We are a very poor county with a rapidly decreasing population and tax roll, and are, like a good many others, trying to get by for the present. If there was an opening here we would have filled it from the ranks of our County Society.

I trust, Doctor, that you will believe that I am prompted by no selfish motive in writing this.

Yours very truly,
E. J. EVANS, *Secretary*,
Ontonagon County Medical Society.

IODISM

J. O. FIRTH, Chicago, believes that at present iodine intoxication is limited mainly to attempts at suicide or to accidental causes. The introduction of solutions and compounds containing large percentages of iodine are used extensively in therapeutics or as opaque substances for radiography of cerebral and spinal spaces, genito-urinary organs, uterus and tubes, sinuses and bronchi. Such preparations are potential sources of iodism. Idiosyncrasy to iodine and inevitable errors and accidents of technic may lead to an increasing frequency of these conditions unless the dangers are realized and measures for prevention and treatment are instituted. Severe skin eruptions with varying degrees of catarrhal involvement, mostly in the respiratory tract, or severe gastro-intestinal disturbances or both seem to be the most commonly reported symptoms of iodism. The author suggests that when using chloriodized peanut oil as a therapeutic measure the following precautions should be followed: The patient should be instructed that none of the sputum should be swallowed during the procedure, nor afterward as long as the taste or smell of the oil is recognized. Films should be developed at once and if there is any considerable quantity of the iodized oil in the stomach it should be removed immediately by gastric lavage or induced vomiting and followed by a saline cathartic, and fluids by mouth should be pushed.—*Journal A. M. A.*

MEDICAL ECONOMICS

THE BATTLE CREEK PLAN FOR MEDICAL CARE OF THE INDIGENT. THE ACADEMY OF MEDICINE AND DENTISTRY

For more years than we like to remember the subject of the care of the indigent has been a bone of contention between the doctors and county poor commissioners and other relief agencies. Since the state or the next government unit, the county, city or township, is responsible by law for medical care as well as material relief for its indigent citizens, the problem of furnishing adequate medical service should offer no serious difficulty providing there is willingness on the part of both parties to get together on a humanitarian basis and in the spirit of coöperation. Without the benefit of a well worked out plan or system, medical relief often becomes the pawn of those political departments of government assigned to relief work. These agencies could not be expected to impartially rotate the service among all the doctors, although, as tax-paying citizens, they contribute their share of public funds for relief purposes.

The age old traditions and ethics of the medical profession are not easily adaptable to any sort of bargaining. Only in the case of sickness among those unable to pay, will doctors consider the subject of contract practice. During last year, 1932, in Calhoun County with a population of 85,000, the plan of hiring a full time physician to care for the indigent cases was tried out and the medical care of county cases was turned over to a doctor imported for that purpose. On account of the volume of work, no matter how well trained the doctor, it would be impossible for him to fulfill all the requirements and demands made upon him to cover all the specialties of the present day practice.

It was soon discovered that he could not, in addition to being an internist, fill the shoes of surgeon, an orthopedist, an obstetrician, a pediatrician, an eye, ear, nose and throat specialist, etc. As a result, the economy of hiring a one man county doctor did not meet expectations, for the county had also to pay for help from various specialists employed to meet the needs of the occasion. The total cost of furnishing care to the worthy indigents was, in the aggregate, just as much as it had been in other years. With a strange doctor, many of the poor people refused to submit themselves to his care largely through lack of confidence. They wanted their own doctor and in many cases got him and received the usual care at his hands, but with no hope of rendering pay to him for his service.

THE UNIT SYSTEM

Under the old system each county acted through its supervisors and its poor commissioners as the relief agency to furnish material relief and medical care to the indigent residents of the county. With the passage of the new law the indigent relief has become a problem for each city and township. Confronted with this situation the city of Battle Creek was open to suggestions as to the most effective method of caring for the indigent sick.

Accordingly a meeting of Battle Creek physicians and dentists was called, November 10, 1932, which resulted in the formation of the Battle Creek Academy of Medicine and Dentistry, a non-profit non-dividend corporation. Their first undertaking was to obtain the facts as to the number of cases

treated in other years, and the aggregate costs to the county for their medical care. These figures, through the free coöperation of county officials, were made available, and were taken as a basis for an estimate for future service. Based upon these findings, a contract was made with the city to furnish medical care, with ordinary medicine and including surgery to the indigent sick in Battle Creek for the year 1933, for the sum of $12,000, payable in semi-monthly installments of $500.

The next vital question to settle was the problem of determining the economic status and worthiness of the family requiring attention.

SOCIAL WORKER

The Academy of Medicine and Dentistry has its own investigating committee, who with an experienced social worker and former county nurse, whom they employ at their own expense, together with the city appointed Director of Relief, serve the interests of both doctors and the city by investigating the worthiness of each case. The plan of action is carried out as follows:

Each member of the Academy who has an office or house call from a family or individual who appears to be unable to pay for service, or who already is receiving fuel, food or rent from the city, would at once render first aid with no question as to forthcoming pay. He at once makes his report on a special notification card, to the Academy headquarters, and the visiting nurse, together with the relief director employed by the city, investigate and, if found worthy, the doctor continues to give medical care until the case recovers. If unworthy, the doctor would treat the case as any other private patient. At the end of the month he sends an itemized statement to the Auditing Committee of the Academy. This bill for service is rendered at the usual prices for such service in this city. The Auditing Committee discounts the bill 50 per cent, and then at once pays the doctor half of the discounted bill, or 25 per cent of the original bill. The rest of the account remains unpaid until the end of the year, when any remaining funds available would be pro-rated up to the amount of the unpaid balance of each doctor's bill. The expense of hospitalization, special orthopedic appliances, insulin, vaccines and a few other specials are not included in this plan, but are specially provided for by the city.

The Battle Creek Academy of Medicine and Dentistry is an incorporated body with its own officers and is prepared to function as a relief agency in this time of stress and stringency. It is strictly a non-profit medical service, sponsored by the members of the Calhoun County Medical Society and Dentistry, and is offered, with definite limitations, to the indigent residents of Battle Creek and certain environs. While sponsored by the members of the Medical and Dental Societies, its terms are binding only upon those of its members in active practice who subscribe to its operation.

AIMS

The Academy of Medicine and Dental service is devised to fulfill definite objectives and ideals; among them are the following:

1. To preserve to the private practice of medicine and dentistry its individualism, its incentive to scientific excellence, its reward for that excellence: the free choice of doctor or dentist to remain with the patient, and to see that the emoluments for service are equitably distributed.
2. To provide the sick poor in the present emergency with the same quality of service and tender care as can be had upon the usual fee-for-service basis.
3. To encourage the free use of consultation service in special or obscure cases.
4. To return the practice of medicine and dentistry to the local doctors and dentists where it rightfully belongs.
5. To forestall or replace various systems of medical care established for profit through lay or contract practice.
6. To provide a means whereby temporarily financially embarrassed sick people may call upon their own family doctor without being humiliated.
7. To promote disease prevention by the process of public education, and by the exchange of ideas upon the latest scientific methods of treatment.
8. To restore the confidence of the patient in the high ideals and purposes of organized medicine.
9. To endeavor to prevent financial embarrassment of large numbers of citizens from developing in chronic pauperism.

The Academy of Medicine and Dentistry is the result of an effort on the part of the medical and dental profession of Battle Creek to extend to the limit their professional co-operation in the present emergency. It is also an effort to forestall state medicine by answering the question as to whether these professions can submerge their own interests in behalf of the health of the indigent public.

While the Academy is now in actual operation, it is yet too soon to say how perfect it will function. It doubtless has many weaknesses, but it is expected that these will be corrected as soon as they appear. The number of cases passed by the investigating committee for medical care during its first month of existence suggests that a huge epidemic is raging. However, this apparent rush of business is explainable on the ground that all those registering at the city welfare headquarters are given carte blanche service by the Academy members in case of sickness. After a few months, or possibly not until the end of the year, will it be possible to pass judgment on how well it fulfills its mission. Careful records of cases by the Social Worker, and systematic accounting of its funds are being kept by an expert accountant and, as the experiment unfolds, one may hope for a wealth of facts upon which to guide in other experiments of this kind.

Battle Creek is a city of 50,000 population, and has forty-five physicians and twenty-seven dentists in active practice, who are members of the Academy.

WHOOPING COUGH: STUDY IN IMMUNIZATION

LOUIS SAUER, Evanston, Ill., points out that from 7 to 8 c.c., of a relatively fresh pertussis vaccine (1 c.c. = 10 billion), made from five to seven recently isolated, hemolytic strains, given hypodermically in divided weekly doses seem to have immunized an appreciable number of young susceptible children. During the past four years about 300 nonimmune children have been injected without any untoward symptoms. The local reaction is transient. The leukocyte count on the day of the last injection in 60 per cent ranged from 12,000 to 15,000 per cubic millimeter, with the percentage of small lymphocytes often increased. There have been eight certain (cohabitational or household) exposures, and a total of 127 probable (transient or accidental) exposures without any child contracting whooping cough.—*Journal A. M. A.*

SOCIETY ACTIVITY

The A. M. A. convenes in Milwaukee the week of June 12.

There are some interesting reports under County Society news. Read them.

A Post-Graduate Conference will be held in Saginaw on March 9. See the program in this issue.

Did you read the Medico-Legal Committee's report in the February issue? If not, do so, for it tells you how best to guard against suits.

Calhoun County held a memorial meeting on February 7 for the late Dr. Ray C. Stone. Dr. B. R. Corbus delivered the memorial address.

The April issue will contain the papers and discussions of the Annual Conference of County Secretaries held in Grand Rapids on February 28.

A joint meeting of Manistee and Mason County Societies was held in Ludington on February 23, at which your Secretary discussed pending medical problems.

Are you a Fellow of the A. M. A.? Ascertain whether you are merely a subscriber to the A. M. A. Journal. A fellowship application should be made. The annual price is the same.

The Committee on Civic and Industrial Relations has caused a bill to be introduced in the legislature which if enacted will enable doctors, hospitals and nurses to obtain a lien against insurance and liability settlements for services rendered in cases arising from automobile accidents. See your Senators and Representatives and secure their support for this bill.

Income Tax: Such a proposal is now before the Legislature. It involves all professions and salaried executives. Our policy has been to record organizational expressions only in matters related to health and medical practice. In civic matters, and taxes are civic, approval or disapproval should be recorded by joining other citizens or civic bodies in expressing personal attitude and opinions.

Advertisers: This issue contains several new and "keyed" ads. Read them, reply to them. Your patronage determines our advertising earnings. If you are busy request your wife to answer for you. Auxiliaries can be most helpful in lending patronage support. Increase the value of our advertising pages by giving business preference to those who use this space and contribute to your Journal.

DR. C. A. NEAFIE GOES TO MAINE

Announcement was made on February 10, that Dr. C. A. Neafie of Pontiac had been appointed Deputy Director of Health for the state of Maine. He assumes his new duties on March 1, 1933.

Dr. Neafie's professional affiliations have been as follows:

PROFESSIONAL AFFILIATIONS

Fellow—American Medical Association.
Member—Michigan State Medical Society (Councilor, 15th District 1930-1935).
Member—Oakland County Medical Society (Secretary, 1927-1930; President-Elect, 1932; President, 1933).
Fellow—American Public Health Association.
Member—Michigan Public Health Association (President, 1924-1926).
Member—Oakland County Public Health Association (President, 1928-1930).
Member—Delta Omega Society (Delta Chapter, University of Michigan) (Honorary Public Health Society).
Member—International Association of Medical Health Officers.
Member—American Association of School Physicians.
Member—Society of American Bacteriologists.

Dr. Neafie is a graduate of the University of Maryland, 1909, M.D.; University of Michigan, 1924, M.S. (in Public Health). He came to Pontiac, Michigan, in 1912 to accept an appointment on the resident staff of the Pontiac State Hospital. In 1914 he entered private practice in Pontiac, in 1917 was appointed part time health officer of Pontiac, and in 1918 whole time Director of Public Health.

On February 15 the Oakland County Medical Society tendered him a dinner. Addresses were made by local members and by President Robb and Dr. Henry Vaughan.

Congratulations are extended to Dr. Neafie. Our good wishes attend him in his new field of professional work.

Our society is indebted to Dr. Neafie for time, labor and unselfish services contributed for the advancement of all of our organizational activities. His was a goodly example

Dr. C. A. Neafie

and gained for him a host of friends. We shall all miss him but will continue to hold him midst pleasant memories as a gentleman and a trustworthy friend.

BANK MORATORIUM

During the existence of this bank moratorium and pending enactment of legislation county secretaries are requested to remit state dues by *post office or express money orders.* For these we can secure currency to pay current bills.

As you collect dues do not deposit them in your local bank. Legislation and rules will undoubtedly be enacted whereby you can withdraw only a percentage of your deposit. Take the member's check and cash it and then remit with a post office or express order.

On February 21 we have had over $4,000 in County Secretaries' checks returned. We are holding these for future collection.

Please observe the above request and remit all dues possible to collect as suggested.

A NEW RACKET

Rackets are seemingly the order of the day and invade many fields. An old one is being revived—it is not new.

Recently it was reported that it was being worked anew in Michigan. A young, usually attractive, woman calls at a doctor's office. On admission to the consulting room she advances certain complaints referable to the pelvic region and suggests an examination. The doctor has no office nurse or assistant. Apparently this is known, for these are the doctors who are put on the spot. The examination is made. The patient departs.

Within a day or two the doctor receives a letter from an attorney declaring that Miss Blank claims the doctor attempted to assault her and that the case can be hushed up and settled for a certain amount. And there you are!

The warning is given to be on guard. Never make a pelvic examination without the presence of a third known party. Observance of this rule will prevent your being victimized. When such threats are made report them to the police at once.

MICHIGAN STATE MEDICAL SOCIETY
And
DEPARTMENT OF POSTGRADUATE MEDICINE OF UNIVERSITY OF MICHIGAN POSTGRADUATE CONFERENCE

Saginaw, Michigan—Thursday, March 9, 1933
Bancroft Hotel, 10:00 A. M.

1. Opening Statement—Councillor J. H. Powers, presiding
2. 10:10-10:40 Principles in Treatment of Fractures (Lantern Slides).
   F. C. Warnshuis, M.D., Grand Rapids
3. 10:40-11:10 Nephritis.
   Richard M. McKean, M.D., Detroit
4. 11:10-11:40 Endocrinological Factors.
   Robert C. Moehlig, M.D., Detroit
5. 11:40-12:10 Serology.
   Richard M. McKean, M.D., Detroit

   12:10–1:15 Luncheon
6. 1:15-1:45 Economic Problems Involving Medical Practice.
   F. C. Warnshuis, M.D., Grand Rapids
7. 1:45-2:15 Endocrinological Therapy.
   Robert C. Moehlig, M.D., Detroit
8. 2:15–2:45 Adequate Medical Care.
   Nathan Sinai, Ph.D., Ann Arbor
9. 2:45-3:45 Community Interest and Problems. Round Table Discussion.

The above program will govern this Saginaw

Conference. Councilor Powers cordially invites every member in the vicinity of Saginaw to attend. The members of the Bay County Society are invited to participate in this Conference. Please note the time and place, plan to attend and bring a friend.

UNIVERSITY OF MICHIGAN
The Department of
POST-GRADUATE MEDICINE
and the
MICHIGAN STATE MEDICAL SOCIETY
announce a
Post Graduate Course
in
PULMONARY TUBERCULOSIS

University Hospital
Ann Arbor, Michigan
March 20-24, 1933

ANNOUNCEMENT

The newer methods in diagnosis, in medical and surgical treatment, and in the post-sanatorium care of pulmonary tuberculosis in adults and children are emphasized in this course.

One of the difficulties experienced in the care of pulmonary tuberculosis is due to the chronic character of the disease. Patients have to be kept under observation for prolonged periods, and unless large numbers of beds are available there is bound to be, at all times, a considerable number to whom sanatorium privileges are not available. During the past few years certain mechanical and surgical procedures have greatly increased the number of cures as well as materially shortened the period of disability. One of the newer methods of treatment is a very simple procedure which puts the affected lung at rest. When the affected lung reaches a certain stage of healing and the patient is no longer a menace to those about him, he might in safety return home if, within reasonable distance, there are doctors trained to carry out this particular form of treatment.

The history of past economic depressions would lead us to expect an increase in tuberculosis. This course offers an opportunity for physicians to obtain instruction in tuberculosis at a time when they can best afford to take advantage of it.

Lectures, clinics, ward rounds, surgical demonstrations and opportunities for physical examination of patients will be given.

Registration is limited. Enrollment will be in order of application. Fee is $10.00.

Address:

DEPARTMENT OF POST-GRADUATE MEDICINE
UNIVERSITY HOSPITAL
ANN ARBOR, MICHIGAN

Unless otherwise designated, class will meet in Room 7308

Monday, March 20th

MORNING

8:00–10:00 Registration. Room 2040
10:00–11:00 Anatomy and physiology of lungs and respiration. DR. JOHN W. BEAN
11:00–12:00 Bacteriology. Room SB360 DR. REUBEN L. KAHN

AFTERNOON

1:00–2:00 Pathology of tuberculosis. Pathology amphitheatre. DR. CARL V. WELLER
2:00–3:00 Tuberculin and allergy. DR. HENRY S. WILLIS *Northville*
3:00–4:00 Epidemiology and tuberculosis control. DR. HENRY D. CHADWICK *Detroit*
4:00–5:00 Tuberculosis in children. DR. HENRY D. CHADWICK *Detroit*

Tuesday, March 21st

MORNING

9:00–10:00 Office diagnosis of tuberculosis. DR. GEORGE C. STUCKY *Lansing*
11:00–11:00 Methods of history taking and their importance DR. JOHN B. BARNWELL
11:00–12:00 Value of the physical examination in various types of pulmonary tuberculosis. DR. ARTHUR C. CURTIS

AFTERNOON

1:00–3:00 Differential diagnosis of tuberculosis and the common lesions simulating pulmonary tuberculosis. X-ray films. Room G420 DR. FRED J. HODGES
3:00–5:00 Demonstration by patients of the common physical signs in pulmonary tuberculosis. DR. ARTHUR C. CURTIS AND STAFF

Wednesday, March 22nd

MORNING

8:00–9:00 Minimal requirements for a diagnosis of pulmonary tuberculosis. DR. JOHN B. BARNWELL
9:00–10:00 Problems in diagnosis. DR. HENRY FIELD
10:00–11:00 Laryngeal tuberculosis. Room 1603 DR. A. C. FURSTENBERG
11:00–12:00 Tuberculosis of bone and joint. Amphitheatre, second floor. DR. CARL BADGLEY

AFTERNOON

1:00–2:00 Genito-urinary tuberculosis. DR. REED M. NESBIT
2:00–3:00 Relation of physician to national, state and local organization. MR. THEO. J. WERLE *Lansing*
3:00–4:00 Classification of pulmonary tuberculosis. DR. JOHN B. BARNWELL
4:00–5:00 Activity of tuberculous foci. DR. JOHN B. BARNWELL

Thursday, March 23rd

MORNING

8:00–9:00 Treatment. Fundamentals. DR. SALVATORE LOJACANO *Marquette*
9:00–10:00 Rest of the diseased lung. DR. JOHN M. SHELDON
10:00–11:00 Indications for pneumothorax and results. DR. ARTHUR C. CURTIS
11:00–12:00 Indications for phrenicectomy and results. DR. R. H. MORGAN *Detroit*

AFTERNOON

1:00–2:00 Indications for other surgery. DR. CAMERON HAIGHT
2:00–3:00 Light therapy. DR. WILLIS S. PECK
Diet MRS. DOROTHY S. WALLER
3:00–4:00 Complications and their treatment. DR. FERDINAND R. SCHEMM
4:00–5:00 Problems in treatment. STAFF

Friday, March 24th

MORNING

8:00– 9:00 Demonstration of pneumothorax. Room 7307
DR. THOMAS M. DURANT AND STAFF

9:00–12:00 Thoracic surgery clinic.
DR. CAMERON HAIGHT AND STAFF

AFTERNOON

1:00– 3:00 After care. DR. BRUCE DOUGLAS *Northville*

3:00– 4:00 Methods of follow up.
DR. JOHN B. BARNWELL

4:00– 5:00 Surgery ward rounds.
DR. CAMERON HAIGHT

HONORING PRESIDENT-ELECT G. L. LEFEVRE

"For forty years I have been on friendly terms with Dr. George LeFevre, and I am frank to say that today we are the best of friends. No greater tribute can be paid to him than that we should remain thus." So said Dr. Black of Holton, Michigan, at a dinner given in honor of Dr. George LeFevre, January 25, 1933, at the Century Club, Muskegon, Michigan.

Muskegon County Medical Society set aside Wednesday, January 25, in which to pay homage to its most illustrious members, and to take cognizance of the fact that one of its members has been chosen as president-elect of the Michigan State Medical Society. For the first time in the history of the State Medical Society have they seen fit to elevate a member of the Muskegon Society to this office. Muskegon is more pleased than they can say, and since the honor was to be conferred upon our society, the fact that Dr. George LeFevre was the individual recipient meets with the unanimous and enthusiastic approval of each and every member. No better evidence of the regard in which his colleagues and his fellow citizens hold him could be demonstrated than at this function.

Dr. George LeFevre is more than merely one of Muskegon County's leading physicians and surgeons. His myriad activities have dipped into all walks of life and not only has he accomplished much for the betterment of the practice of medicine, but the community itself has also gained commercially, civically, and financially. Muskegon is better off for his having been here, and the most unique feature of his whole career is the fact that in all his various services there has been a minimum of rancor and dissension. He makes friends, even with those whom he opposes, and keeps all friends.

Conservative in his actions, yet ready to change for the better at any time, kind and courteous, helpful, the arbiter of disputes, the tactful diplomat, he is one gifted in leadership qualities—the friend of all.

One hundred persons attended the banquet in his honor, which incidentally was the regular meeting of the Muskegon County Medical Society. This was the largest and most enthusiastic meeting in the history of our society. Men whose efforts in behalf of organized medicine, well known to all of us, were there—the Mayor of Muskegon, secreatry of Chamber of Commerce, directors and cashiers of two of our banks, the president of the Bar Association, of the Dental Society, the Board of Trustees of Hackley Hospital, and many other guests from within and without the profession.

Dr. Warnshuis spoke of his years of friendship with Dr. LeFevre: spoke in his inimitable style, which mere words cannot describe. The bonds of fellowship were once more made evident and strengthened, between these two stalwarts of organized medicine. Dr. Corbus of Grand Rapids, fellow councilor of Dr. LeFevre through these many years of association, livened up the evening with his reminiscences of Dr. LeFevre's automobile driving. He expressed surprise at being able to honor the guest of the evening at his age, and assured those present that some divine aid was responsible for his presence on this earth. Dr. Boys

DR. GEORGE LEFEVRE

of Kalamazoo and Dr. MacMullen of Manistee, also members of the council, joined in their praise of Dr. LeFevre.

One may be honored and respected by his sometime associates, yet those who must contact him in his daily routine are apt to know best. Those men who have associated with Dr. LeFevre in the workings of organized medicine had spoken of him as they knew. But what about the home folks?

Dr. F. W. Garber, Sr., for many years his associate, was unable to be present due to illness. In his expression of regrets, he assured us that Dr. LeFevre's initiative and fullness of purpose have been of inestimable value to Muskegon. Friendly always, a hard worker, progressive and ever endowed with the spirit of youth and of coöperation, these were a few of his qualities. Dr. Black of Holton expressed feelings of the warmest nature to his old associate. Dr. Roy Holmes of Muskegon, one of the younger members of the society, was so impressed by the results of his association with Dr. LeFevre that he was somewhat non-plussed.

Mayor W. W. Richards of Muskegon voiced the opinion of the City Commission. Thirteen years ago Muskegon discarded their old form of government, selected a charter commission of which the Mayor and Dr. LeFevre were members, put the new charter into effect, and as an evidence of the popular esteem in which the good doctor is held, chose him as one of its first commissioners. The mayor reviewed those past years, and also spoke of Dr. LeFevre's efforts on behalf of the Muskegon County

Tuberculosis Sanitarium, of which Board Dr. Le Fevre is president.

Mr. Otto Seyforth, president of the West Michigan Foundry Company, and fellow bank director of Dr. LeFevre, spoke of the associations as engendered in the financial world. Mr. Sayforth's opinions as stated were in keeping with the others—helpful ever, yet never shirking responsibility.

Mr. John Beukema, secretary of the Chamber of Commerce, spoke on his associations with Dr. LeFevre. Some years previous an organization was started, known by the name of "The Industrial Foundation," the purpose of which was to encourage new industries to locate in this area as well as to aid those already established. For president they chose Dr. George LeFevre. Mr. Beukema could not be too enthusiastic in his praise of the business foresight, sagacity and helpfulness of Dr. LeFevre, nor could he even calculate the benefits the community had derived from the services so freely and cheerfully given by him whom we were honoring.

Mr. Archie McRea, editor of the Muskegon Chronicle, and member of the Board of Trustees of Hackley Hospital, reviewed their associations, both on the charter commission of Muskegon and then the hospital. His words of praise were directed toward the fact that the doctor was not only proficient at suggesting improvements, but persevering in his efforts to see the things suggested turned into actualities.

Dr. Walter N. Steele, of the Muskegon Dental Society, expressed thanks for the coöperation of these two allied professions, most especially for the privilege of associating and counseling with so gracious a personage as Dr. LeFevre.

To listen to the praise that had been heaped upon his head would not only tend to flatter one of a lesser build than Dr. LeFevre, but would have made the evening one long series of climaxes. But Dr. T. G. Yeomans, of St. Joseph, the principal speaker of the evening, tore away the cloak with which the others attempted to cover Dr. Le Fevre and by personal anecdotes and reminiscences revealed him as the fellow man he is to us all, thus completing the picture.

Horatio Alger, Jr., in his palmiest days, never wrote a story better than Dr. LeFevre's biography. Poor boy, drug clerk, physician, and surgeon, chairman of the Board of Directors of one bank, president of another, City Commissioner, president of the Board of Tuberculosis Sanitarium, president of the Industrial Foundation, nominal head of the Muskegon Chapter of the Crippled Children Society, president of the Michigan State Board of Registration in Medicine for sixteen years, and many other honors not mentioned have fallen to his lot. But to be the recipient of these, and at the same time remain a staunch and true friend of all he meets is evidence of the worthiness of the gentleman, and evidence of his further due to be elected President of the Michigan State Medical Society. We cannot call this a climax, for in the words of the good doctor himself, he expects to be with us for twenty years more.

We of Muskegon County Medical Society hope that such a state of affairs as now exists will continue indefinitely. And may the future find more honors to confer upon him, who so greatly deserves them.

We regret that Drs. McLean and Robb were detained in Detroit, with school board affairs. Dr. Kelly of Detroit was also unable to be present. Dr. Hyland was confined to his home by illness. Dr. Richard Smith, Dr. Bruce, Dr. Gorsline, and Dr. Marshall of Flint were vacationing and so could not attend.

R. J. D.

HOSPITAL PRACTICE

It is difficult to understand why Trustees or a Board of Managers of a hospital should consider themselves impelled to develop plans for engaging in medical practice.

Hospitals are nursing institutions. They were established to provide facilities for rendering care and to enable the doctors to more ably institute medical and surgical treatments. That is their sole function.

Within the past fifteen or twenty years, hospitals have gradually sought to broaden their scope of endeavor. Free clinics were established with medical staffs, and free professional and hospital care is being provided for a certain class of patients. There is nothing wrong in that, provided the service is rigidly limited to those who are in dependent circumstances. So far all was well.

In the last ten years hospital boards and managers have gone on a building debauch.

New hospitals were built at tremendous costs. Furnishings and equipment were made most elaborate and expensive. Bed capacity was frequently expanded beyond community needs. Operating and maintenance costs increased from three and four dollars per patient day to eight, ten and twelve dollars per day. These elaborate structures presented financial problems of administration that could not be balanced by endowment earnings and what patients were able to pay.

Added to this were the nurses' training schools. The period of training was unwisely increased from two to three years. The pupil nurse during her first year spent the greater part of her time in the class room, yet she had to be housed, fed and clothed. A larger number of salaried instructors and supervisors was employed, housed and fed at a markedly increased cost to the hospital and charged against patients' care.

Thus there came into existence elaborately constructed hospitals, expensive to maintain and costly to administer. Then came the depression with a very marked falling off of patients able to pay for hospital care and an increased number of charity patients. Deficits mounted from month to month. Credit became exhausted. Charity funds almost vanished. Retrenchments of a limited character were made but did not solve the financial problem. Then managers and boards cast about for new sources of revenue.

During the past three years, and particularly during the last year, numerous plans were outlined. They were: flat rates, yearly care, and hospital care and medical services at a given rate per person, per family or per case. In Texas, for a given monthly payment several hospitals offered a certain number of weeks of hospital care. In Philadelphia recently two hospitals offered hospital and medical care upon payment of monthly premium rates. Thus hospitals are seeking to fill their beds and secure income by bargain rates and competitive solicitation methods.

The medical profession has no quarrel nor is it in disagreement with the trustees of any hospital advancing plans for providing hospital care at given rates payable in installments provided that the persons who accept these terms have the right to select and call the doctor they elect. Their free choice of physician must be assured and not limited to a small staff. Of course that selection should be restrained to the recognized, competent physicans of the community.

The medical profession does object and strenuously so, when a hospital offers in addition medical and surgical care in which the physician or surgeon has no voice in fixing the fee he shall receive

for his services. Hospitals cannot presume to fix a flat rate and arbitrarily deduct its percentage and then say to the doctor or surgeon, "You will receive so much for your services." The profession holds, and jealously so, that each doctor shall ever have the right of fixing the value of his professional service. Whenever a hospital usurps and denies that right the profession, in self protection, will resist every and all such attempts, and act to defeat such proposals.

The profession assumes the same attitude in regard to Hospital Diagnostic Clinics. There is no opposition to such clinics as long as free choice of physicians is countenanced and the physician is free to fix his own fee.

Exploitation of physicians and their services in order to increase hospital income cannot be condoned or approved.

Hospital authorities should remember that for several years their increased rates have been the chief factor in increasing the expense of illness. The costly built and expensively operated hospital has created increased rates and added very materially to the expense of sickness. The physician's or surgeon's fees constitute but a small percentage of the total sickness cost as has been clearly shown in several recent investigations. Retrenchment should be made and balanced operating budgets should be accomplished through other means. Room exists for some very radical hospital administration and operation reforms. They must not be attained through exploitation of the doctor or by competitive means that are discriminatory.

A SPONSORED PUBLIC MEETING

On Thursday evening, January 19, 1933, the Medical Society of Ingham County sponsored a public meeting in the Prudden Auditorium. There were approximately 1,500 people present.

Mr. Clarence E. Bement, chairman of the board of the Novo Engine Company, was Chairman of the meeting. He was introduced by Dr. Wm. E. McNamara, president of the Medical Society. Mr. Bement, following a brief talk on government cost reduction, introduced the speaker, Capt. C. M. Mills, Field Secretary of the National Economy League, who gave the main address of the evening. Stating that Economy is the watchword of the hour, he defined Economy as fundamentally "household management," and not merely the spending of money. It is essential to practise household economy in government, and the vital question is where and how to use economy so that the greatest benefits for all the people may be obtained. It is not real economy to seriously curtail or even eliminate necessary and beneficial services of the government by which the people receive full value. Therefore it is essential economy to fight to a finish to cut out of governmental expenditures every dollar which represents favors for the few, or obvious extravagances, usually gained by highly organized and efficient minorities or blocs. It is upon these principles that effective and sweeping slashes in government costs can and must be made; it is upon this platform that democracy can be saved from eating its head off in overhead, from chaos, from final destruction.

The pressure of public opinion and the alarming decline of revenue at last has begun to make local legislators really serious in slashing the costs of government. In the first six months of the present fiscal year, Uncle Sam went into the red, or into debt, $1,160,000,000. This monstrous sum is 3 times the cost of the Panama Canal; nine times the cost of the war debt payments due last December from the debtor foreign nations. It averages more than nine dollars for every man, woman and child in the U. S. Every day the public debt increases $6,300,000. What are the causes of this situation? First, income taxes have fallen $272,000,000 behind last year. Income taxes now represent only 26 per cent of our Federal revenue, in contrast to about 60% in 1929-30. Secondly, custom duties and tariff charges have declined to new low levels. Third, the so-called Special or Nuisance taxes have failed by almost 50 per cent of expected revenue.

A summary indicates the following facts.

1. The income tax at the present time is *not* a substantial source of Federal revenue and is declining rapidly both in total amount and in number of taxpayers.
2. The special nuisance taxes instituted last summer have failed to come up to estimates by a wide margin.
3. Federal income is now imposed upon a large body of consumers through special taxes and indications are that even wider distribution of consumer taxation will take place.
4. The present burden of federal taxation shows that either new taxes must be imposed, or else sweeping slashes in departmental budgets of the Federal government must take place.

The answer lies in Economy, not more taxes. National defense, Public works and the Postal departments show reductions in the new budget, while veteran relief increases by $41,287,000.

In two important sectors of the budget, the National Economy League has emphasized economy:

1. The League is committed to a reorganization of the executive branches of the government to eliminate needless departments, bureaus, commissions which are duplications of functions, effort and expense. The League will support any administration which can prove economy through mergers.
2. The League stands for reduction of expenses now paid to Veterans of all wars now amounting to almost one billion dollars per year.

The National Economy League has set up the policy of advocating the most liberal treatment possible for those actually disabled in line of service, for the widows of men killed or who died of disease in line of service, and for their dependents. On the other hand, it has resolved that not one cent shall be paid to those veterans who have returned from wars able-bodied, and who now seek by the pressure of strongly organized minorities payment for disabilities that have occurred in civilian life. As a first specific objective in line with this policy, we seek the eliminaton of legislation which allows $450,000,000 to be paid out during the current fiscal year to Spanish-American and World-War veterans who suffered no disabilities in actual war service without impairing the principle of liberal compensation for real war sufferers and their dependents.

The total cost of the Civil War was $3,500,000,000. It is estimated that before the last survivor or widow of a Civil war veteran will die, we will have paid $8,500,000,000 in pensions. Likewise, the cost of the Spanish War was about $582,000,000, but before the last beneficiaries have died we will have spent over $6,300,000,000. Likewise for the World War, according to General Hines of the Veterans' Bureau by 1945, with no changes upon our legislative books, we will have spent a sum equal to the entire cost of the World War, $21,500,000,000. It is estimated that the entire cost of the World War will be well over $80,000,000,000.

Since the formation of our government, $15,500,000,000 has been paid for Veterans' relief of all kinds. Of this sum, including bonus loans, we have paid approximately $7,000,000,000 for World War veterans. General Frank Hines, Director of the

Veterans' Administration, reports that this year, although England suffered casualties of over 2,000,000 men and France more than 5,000,000 men, in contrast to our 350,000, the average annual payment for the dead and injured in England this year will be $59 per man; in France $51 per man and in the U. S. $2,658.

Last year the government spent more than one-half of the total revenue derived from all sources for veterans. This year, the appropriaation for veterans vastly exceeds the entire cost of the government in each of the seven years prior to the World War.

President Hoover attached in his budget recommendations for $127,000,000 reduction in Veterans' relief. But, the recommendations deal only with comparatively small reductions—a mere whittling down of vast wasteful expenditure of the people's money. Never before has a most useful opportunity been given to the Chief Executive of our country to go to the heart of the question—to go before this nation on the basis of moral principles.

The meeting adjourned.

RUSSELL L. FINCH, *Secretary.*

COUNTY SOCIETIES

BAY COUNTY

A regular meeting of the Bay County Medical Society was called by President Huckins, Wednesday evennig, January 11, 1933, at the Wenonah Hotel, Bay City, at which time the District Nurses' Association were guests. Over eighty were present.

The meeting was given over to a discussion of the subjects affecting the Medical and Nursing professions. Among the subjects discussed were: Nurses' fees; Nurses' register; Nursing bureau; Nurses' roster.

The meeting developed an apparent close coöperation between the professions. Expressions were had from the Public Health Nurses and the Private Duty Nurses.

The meeting was further featured by talking movies, provided through the courtesy of the Petrolagar Laboratories.

The Society, through its members in the American Legion, prepared a resolution, protesting the hospitalization of veterans, away from their own communities.

A regular meeting with thirty members present, was called by President Huckins, at the Hotel Wenonah, Wednesday, January 25, 1933.

The Society unanimously endorsed the Minority report of the Committee on the Costs of Medical Care.

The members were addressed by Dr. Earl I. Carr, of Lansing, on the subject of "Medical Legislation." Dr. Carr, a master of the subject, gave the members some very timely information. He was followed by William Burns, Executive Secretary of the Wayne County Medical Society, who also spoke on Legislation and some objectives for the Women's Auxiliary.

Following the meeting, Dr. Allen entertained the members, at his home.

L. FERNALD FOSTER, M.D., *Secretary.*

BERRIEN COUNTY

The Berrien County Society held their annual meeting in Benton Harbor at the Hotel Vincent on December 17, 1932.

The time was given over to a discussion of medical economics dealing particularly with the report of the Committee on the Costs of Medical Care. A summary of the report was given by Dr. A. A. Rosenberry of Benton Harbor and a general discussion was participated in by nearly all present.

Due to the small attendance it was decided to mail the report of the nominating committee on a spcial ballot which could be returned by mail, in that the society does not meet in January or February. The next meeting will be in March when the new officers will be installed.

The results of the election were as follows: President, John Ames, Niles; vice president, Dean Richmond, St. Joseph; secretary and treasurer, W. C. Ellet, Benton Harbor; delegate to state society, W. C. Ellet, Benton Harbor; alternate, Ed. Vary, Niles.

W. C. ELLET, *Secretary.*

EATON COUNTY

The Eaton County Medical Society have elected the following officers for the year of 1933: President, Dr. C. H. Sackett, Charlotte; vice president, Dr. Garner Byington, Charlotte; secretary-treasurer, Dr. B. Van Ark, Eaton Rapids; delegate, Dr. A. G. Sheets, Eaton Rapids; alternate, Dr. K. A. Anderson, Charlotte.

The year 1932 was an unusual year for the Eaton County Medical Society in that it was actively interested in three major problems.

1. The problem of a schedule of fees arranged with the supervisors for indigent cases of the county.
2. A proposed and accepted entrance in Eaton County of the W. K. Kellogg Foundation.
3. The support of County Medical Society to the new County Hospital.

In 1933 we expect to carry on all work started in 1932.

B. VAN ARK, *Secretary.*

GOGEBIC COUNTY

The annual meeting and banquet of the Gogebic County Medical Society was held at the Curry Hotel on the evening of December 20, 1932. The Society was entertained with musical selections and later in the evening Dr. M. A. Gertz, who has recently returned from Vienna, gave an interesting paper on "Psychoanalysis."

After the banquet, the regular business meeting was held with the election of officers for the year 1933: President, Dr. W. J. Pinkerton; vice president, Dr. H. A. Pinkerton; secretary and treasurer, Dr. F. L. S. Reynolds; state delegate, Dr. W. E. Tew; alternate, Dr. C. C. Urquhart; Defense League representative, Dr. D. C. Pierpont.

F. L. S. REYNOLDS, M.D., *Secretary and Treasurer.*

HILLSDALE COUNTY

The Hillsdale County Medical Society met at the Ambler House Tuesday, January 24, 1933, at 6:00 P. M., the President, Dr. Hodge, in the chair.

Dinner was served by the students of the Home Economics Department of Hillsdale College, after which the meeting was called to order by the President and the following program submitted:

1. Minutes of last meeting read and approved.
2. Paper "Neglected Drugs"—Dr. D. W. Fenton.
3. Round Table Conference, "Influenza," led by Dr. C. T. Bower, followed by general discussion.
4. Reading of letter from Dr. Warnshuis in regard to care of the indigent.
5. Miscellaneous business, including appointment

of committee to confer with the Board of Supervisors on the subject of the care of the indigent; committee so appointed—Dr. Green, Dr. Mattson, Dr. Hanke, Dr. Hamilton, Dr. Martindale and Dr. Poppen.

6. Presentation of the fee bill of 1919.
7. Discussion of the proposal to unite the County Medical Societies of St. Joseph, Branch and Hillsdale, which was favorably voted upon, the three societies maintaining their identity but holding their meetings jointly each month.

Dr. Luther W. Day of Jonesville was received into the Society.

The Society then proceeded to the election of officers for the ensuing year, resulting as follows: President, Dr. H. F. Mattson; vice president, Dr. Luther W. Day; secretary-treasurer, Dr. D. W. Fenton; delegate to State Medical Society, Dr. A. E. Martindale; alternate, Dr. C. T. Bower.

D. W. FENTON, *Secretary.*

HOUGHTON COUNTY

At the meeting of January 3, 1933, held at Miscowaubic Club, Calumet, Michigan, the following officers were elected for the year 1933: President, Geo. McL. Waldie, Hancock; vice president, T. P. Wickliffe, Calumet; secretary-treasurer, Arthur F. Fischer, Hancock.

ARTHUR F. FISCHER, *Secretary-Treasurer.*

JACKSON COUNTY

Almost seventy members of the Jackson County Medical Society turned out for the first meeting of the year, which was held at the Elks Temple on the evening of January 17, 1933. After dinner the members adjourned to the Memorial Room for the business and scientific portion of the meeting.

Dr. Smith, Chairman of the Public Relations Committee, suggested that the fees be reduced on house visits to patients living within a radius of five miles of the center of the city to three dollars. After some discussion Dr. Brown moved that the suggestion be adopted. Motion seconded by Dr. Harris. The motion lost by a vote of twenty to twelve.

Dr. Hanna reported that the testing of school children for tuberculosis would be started in the near future. Positive cases will be referred to their family physician for follow-up work. X-ray examination should be urged where the Mantoux test is positive.

During the past few years there has been some objection to having the annual Ladies Night in December on the same day as the election of officers. It was moved by Dr. Alter and seconded by Dr. O'Meara that for this year the annual election be held on the second Tuesday afternoon in December and the Ladies Night on the following Thursday evening. The motion was carried.

Dr. Riley moved that Dr. Walter Finton be appointed to represent the Jackson County Medical Society in the re-organization of the Jackson Chamber of Commerce. Seconded by Dr. Clarke. Motion carried.

Dr. E. F. Lewis was then introduced as program chairman, who introduced Dr. Spaulding of Detroit, who gave an interesting talk on "Cardiac Disorders and the Electrocardiogram."

R. H. ALTER, M.D., *Secretary.*

MARQUETTE-ALGER COUNTY

The annual meeting of the Marquette-Alger County Medical Society was held at the Hotel Northland, Marquette, Michigan, January 17, 1933.

The following officers were elected for the ensuing year: President, Dr. T. R. Laughbaum; vice president, Dr. A. W. Erickson; secretary-treasurer, Dr. D. P. Hornbogen; delegate, Dr. Vivian Vandeventer, and alternate delegate, Dr. R. A. Burke.

It was voted at this meeting that the Society give a rebate of $1.25 on the dues for the coming year, which, with the $1.25 allowed by the State Society, would make the total $2.50, the same as in 1932.

D. P. HORNBOGEN, *Secretary.*

MIDLAND COUNTY

On February 1, 1933, the Midland County Medical Society met at the Country Club. Seven members were present and enjoyed luncheon together.

Charles S. MacCallum was elected president and E. J. Dougher secretary for year 1933.

E. J. DOUGHER, *Secretary.*

NEWAYGO COUNTY

The regular meeting of the Newaygo County Medical Society was held at the home of Dr. O. D. Stryker the evening of January 11, 1933. After the reading and approval of minutes of the previous meetings the following officers were elected for the ensuing year:

President, Dr. W. Geerling; vice president, Dr. O. D. Stryker; secretary-treasurer, Dr. W. H. Barnum; delegate to State Medical Society, Dr. A. C. Tompsett, Hesperia; alternate, Dr. H. R. Moore, Newaygo.

Dr. Guy Post of the County Health unit, and Dr. Chas. Branch, White Cloud, were admitted to membership in the Society. Dr. Post then made a proposal to establish a biological station at the Gerber Memorial Hospital for accommodation of the physicians and hospital use, being agreeable to all.

A delicious lunch was then served by Dr. Stryker and his gracious sister, Mrs. Kik. Nine members were present.

W. H. BARNUM, *Secretary-Treasurer.*

NORTHERN MICHIGAN

The February, 1933, meeting of the Northern Michigan Medical Society was held Thursday, February 16, at the Perry Hotel, Petoskey. The meeting had been postponed a week due to the storms.

After dinner the meeting was called to order by President Frank. The speaker for the evening, Mr. S. B. Harvey of Traverse City was then introduced. Mr. Harvey is connected with the State Welfare Department and gave an interesting talk on child delinquency.

After the talk the regular business of the Society was taken up. Minutes of last meeting were read and approved. Secretary then read the correspondence. New membership committee was appointed consisting of Drs. Conway Wood and James Stringham.

Dr. Mayne was reappointed Legal Representative.

Dr. Dean Burns was appointed to the program committee for March and April.

Applications of Dr. Bernard Beuker of East Jordan and J. E. McGregor of Boyne City for membership were received. Dr. Craddock of Mackinaw City was elected to membership.

E. J. BRENNER, Secretary.

ONTONAGON COUNTY

At the annual meeting of the Ontonagon County Society the following officers were elected for the year:

President, H. P. Blake, Bergland; vice president, J. L. Bender, Mass; secreatry-treasurer, E. J. Evans, Ontonagon; Trustee for three years, H. B. Hogue, Ewen; delegate to State Meeting, E. J. Evans, Ontonagon; alternate delegate, F. W. McHugh, Ontonagon.

E. J. EVANS, *Secretary-Treasurer.*

SAINT CLAIR COUNTY

A regular meeting of the Saint Clair Society was held Tuesday, February 7, 1933, at Edgewater Inn, Port Huron, Michigan. Supper was served at 6:45 p. m. to five guests of the legal profession and four guests of the medical profession as well as to eleven members of the Society. After supper five other members of the Society attended the meeting. Owing to the importance of the subject to be discussed and also because of the interest members of the legal profession might have in the subject, the President of the Society invited the members of the Saint Clair County Bar Association to be present. Owing to inclement weather but five lawyers took advantage of the invitation. The meeting was called to order by President McColl at 7:55 p. m. and all business was suspended except that the Secretary read an application for membership from Dr. H. R. Johnson of Capac. This was referred to the Board of Trustees and Censors for action.

The President introduced Doctor Foster of Detroit, who addressed the Society upon "Traumatic Neurosis." The speaker opened his remarks by saying that the profession should use the term "traumatic" in connection with a neurosis with great caution. He preferred to express such conditions as a "neurosis following trauma" unless it could be proven with reasonable certainty that the condition was truly a "traumatic neurosis." He expressed the idea that a neurosis was primarily a defense reaction against economic conditions and society. Contributory conditions causing a present increase in the type of "neurosis following trauma" were said by Doctor Foster to be, first, the present increased rapidity of work, economic conditions which caused the injured individual to fear the loss of his job, poor first aid facilities in the average industrial establishment and the fact that the intelligence quotient of the average worker was 65 per cent of oormal. Doctor Foster described the usual symptoms of both a neurosis and post-concussion syndrome and discussed the treatment, particularly the preventive treatment of the former. He made the interesting statement that in the establishment of the Eastman Kodak Company, where every employee held a small share of the stock of the corporation, that neuroses following trauma were nil.

Doctor Hershey then addressed the Society upon the subject "Hysteria and Malingering." The speaker made a splendid talk. He defined both conditions, differentiated them both and discussed the physiological and psychological factors entering into the etiology of both. He read several case histories to drive home salient points in diagnosis and etiology. Doctor Hershey gave detailed tests to determine diagnosis of both hysteria and malingering.

The President requested Doctor Heavenrich to open the discussion and afterward the discussion was carried on by Doctors MacKenzie, Smith, Fraser and Cooper and also by Attorneys Walsh, O'Sullivan, Telfer and Wilson. Doctors Foster and Hershey then closed the discussion and replied to several pertinent queries made during the discussion. Inasmuch as both the President and Vice President were called away from the meeting the Secretary assumed the Chair and before adjournment thanked the speakers for making the long disagreeable trip from Detroit and for the splendid talks. He also stated to the visiting lawyers that it had been a pleasure to entertain them as guests and expressed the hope that a joint meeting of the Bar with the Society might be arranged soon in the future. Adjournment at 10:30 p. m.

GEORGE M. KESL, *Secretary-Treasurer.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. F. A. MERCER, President, Pontiac, Mich.
MRS. E. L. WHITNEY, Vice President, Detroit, Mich.
MRS. HERBERT HEITSCH, Secretary, Pontiac, Mich.

BAY COUNTY

The Bay County Auxiliary met Wednesday, January 25, 1933, at the Wenonah Hotel, Bay City, for dinner. There were 22 members present. The regular business meeting was conducted by the President, Mrs. H. Payne Lawrence.

Dues were discussed and it was decided to leave them as they were last year, $1.50. Last year there were thirty paid members, and we hope to have more this year.

The Auxiliary was addressed by Dr. L. Fernald Foster, secretary of the Bay County Medical Society, and by Dr. George M. Brown. We were encouraged to pick an objective and work for that in order to keep the interest of the members, and to keep ourselves informed on the medical situations which may be discussed in the various circles and to correct any wrong ideas which those outside the profession may have.

RUTH M. ALLEN, *Corresponding Secretary.*

CALHOUN COUNTY

The Auxiliary of the Calhoun County Medical Society launched another year of activity and accomplishment with two days of sewing for Nichols Hospital on January 16 and 17, 1933.

The Congregational ladies donated their parlors for the use of the Auxiliary, and a member also assisted with the sewing. On Tuesday they served luncheon at a nominal sum to all who remained the entire day, which made a pleasant break in what, to the Auxiliary and their friends, is strenuous work, such is the energy they apply to it. At the end of the two day period, four hundred finished garments were turned over to Nicholas Hospital, and a dozen or more which were left over were finished later on at the home of Mrs. M. J. Capron, 102 Ann Avenue, at a neighborhood tea.

Mrs. J. E. Cooper is the chairman of the sewing committee, and tentative plans are already made to sew in the near future for Leila Hospital.

The next meeting of the Auxiliary will be a cooperative dinner at the home of Mrs. Clifford W. Brainard, 204 Chestnut Street, on February 7, 1933. Assisting hostesses are Mrs. Russell Mustard and Mrs. R. D. Sleight. An interesting program will follow the dinner. Wives and doctors from out of town are most cordially invited.

The officers for the coming year are: President, Mrs. Manley J. Capron; Vice-president, Mrs. A. M. Giddings; Second Vice-President, Mrs. Carl Wencke; Secretary, Mrs. J. E. Cooper; Treasurer, Mrs. B. G. Holtom.

Announcement of the plans for the coming year will be made at an early date.

OAKLAND COUNTY

A one o'clock luncheon was served January 20 at St. Joseph's Hospital, Pontiac, to members of the Woman's Auxiliary to the Oakland County Medical Society. The President, Mrs. Hubert Heitsch, conducted the business meeting. After the resignation of Mrs. Morrison of Royal Oak as President-elect, Mrs. Irving Neff of Birmingham was elected to take her place. Mr. Ward Culver of Detroit talked on "Legal Aspects of Medicine." The next monthly meeting will be a social gathering of the doctors and their wives.

HELEN C. BAKER, *Publicity Chairman.*

WAYNE COUNTY

The Woman's Auxiliary to the Wayne County Medical Society arranged a very desirable program for Tuesday, January 24, when the Wayne County Medical Society and the Woman's Auxiliary had a social joint meeting in the auditorium of the Maccabee's building, 5057 Woodward Ave. Dr. R. D. McClure, surgeon-in-chief at Henry Ford Hospital, showed moving pictures of "The Olive K. and the Voyage of Exploration to Yucatan," including Chas. B. Kettering, Gar Wood, Edgar A. Guest and Dr. Roy D. McClure.

These pictures were not only interesting but fascinating and thrilling, too. Dr. McClure, in his own clever way, explained all their experiences while vacationing together.

The musical program for the evening was presented by our clever and much admired chairman, Mrs. Frank Hartman. Mrs. Hartman presented Thelma von Eisenhauer, soprano, Ethel May De Mart, contralto, with Mrs. Edwin S. Sherrill at the piano. Mrs. Hartman usually shows her appreciation to these artists, who so willingly share their talents with us, by presenting them with a lovely bouquet of flowers.

The auditorium was packed to its capacity. The Auxiliary also hopes to have many more of these joint affairs since this one proved to be so successful.

On Sunday afternoon, January 29, at 3:30 P. M., another musical and social hour, the second in a series planned by the Auxiliary, was given in the Wayne County club rooms, 4421 Woodward Ave.

We are very happy to announce the following persons who furnished us with this delightful music: Mrs. Roland M. Athay, piano soloist; Helen Kennedy Snyder, contralto soloist; Dorothy L. Doub, harpist, and Stella Susnjar, violinist. To the music lovers in Detroit, Mrs. Athay and Helen Kennedy Snyder need no introductions. Their reputations as musicians have been established and their generosity definitely proven. Those who have enjoyed Mrs. Snyder with the Detroit Symphony Orchestra and over the radio were very happy to meet her on this occasion. Miss Doub and Miss Susnjar come to us from the ranks of the younger generation of musicians and possess talents of unusual charm. A charge of twenty-five cents was made at the door. Tea and social hour followed the program.

The proceeds from these musicals will go towards the Student Loan fund, Welfare fund and the Piano fund.

February 1 marked a prominent day on the calendar, when the Woman's Auxiliary to the Wayne County Medical Society joined to celebrate their first Five Dollar ($5.00) Donor De Lux luncheon on the ballroom floor at the Statler Hotel. This was an outstanding affair of the season.

Dr. Leo M. Franklin, from Temple Bethel, guest of honor and speaker, discussed the question, "Shall Science Save or Destroy Our Civilization?"

Science will wipe out civilization rather than war, thinks Dr. Franklin, unless it couples its inventions with moral responsibility. Dr. Franklin advised not to worry about Technocracy and that Science is no substitute for virtue. He said the heart must rule as well as the head. He also said that there is one thing left out and that is religion. He agreed that the world cannot continue as it is and we cannot live alone and unless science would take religion by the hand and say, "Guide me," it is only fit to put in the hands of the man who has learned to control himself, otherwise it is like placing matches in the hands of a baby. Dr. Franklin warned against a science which would fashion a world in which the strong rather than the fit will survive.

Mrs. C. L. Straith, president of the Woman's Auxiliary, presided, introducing Mrs. Perry Burnstine, luncheon chairman, and Mrs. J. Milton Robb, who was a perfect toastmistress. Greetings were brought by Mrs. F. A. Mercier, of Pontiac, and president of the State Auxiliary.

Guests at the speakers' table included Mrs. Guy L. Kiefer, of Lansing, organizer of the Wayne County Auxiliary; Mrs. Elmer L. Whitney, of Detroit, State Vice President; Mrs. R. E. Loucks, of Detroit, chairman of the Public Relations Committee of Wayne County; Mrs. Perry C. Gittins, co-chairman with Mrs. Perry Burnstine of the Ways and Means Committee, of Detroit; Mrs. Frank W. Hartman, Vice-president of the Wayne County Auxiliary; Mrs. James H. Dempster, second Vice President of Wayne County; Mrs. Hubert Heitsch from Pontiac, State Secretary; and Mrs. E. G. Minor, chairman of the State Public Relations Committee.

A one act play was presented under the direction of Mrs. Treesa Way Merrill entitled "Overtures," given by the Paul Hicky Players.

Mrs. A. H. Whittaker, one of our Auxiliary members, very generously rendered two piano selections, which were a Waltz by Brahms and also a Waltz de concert by Chopin.

Mrs. Liebe Schakne sang several solo numbers with Mrs. A. H. Whittaker at the piano. They were as follows—"My Little Star" (Estrallite) by Manuel A. Ponce; "O Cuba" by E. Sanchez De Fuentes and Giannine-mia from the Firefly, by Rudolf Friml.

The Woman's Auxiliary intends to make this Donor party an annual affair. The programs for this Donor luncheon were sketched and made by Mrs. Perry Gittins, who is one of the Auxiliary members and who is also an artist. Mrs. Gittins has sketched many fancy posters for the Wayne County Club rooms.

Mrs. H. D. Chadwick, another member of the Auxiliary, is also a very clever artist. Mrs. Chadwick is planning on giving an exhibition of her art in her home in the near future for the benefit of the Woman's Auxiliary.

The proceeds for the Donor luncheon will be divided among the objectives of the organization under the guidance of the board of directors.

Mrs. Perry Burnstine and her committee deserve a great deal of credit for their untiring efforts in securing this wonderful program for the Donor party and for the pleasure of the Auxiliary and their friends.

The next monthly meeting will be held at the Florence Crittenton Hospital, 1550 Tuxedo Ave., Highland Park, on Tuesday, February 14, at 1 P. M. Holidays are always an incentive for a party, so for that reason the Woman's Auxiliary is planning to make this a Valentine luncheon.

Miss M. Louise Hood, Superintendent of the Florence Crittenton Hospital, will be the guest speaker. She will talk on "Florence Crittenton Work."

Miss Olga Fricker from the Bonstelle School of Dance and Drama will talk on "Dancing for Health

and Beauty," illustrated by the ballet. Luncheon accommodations are limited to ninety persons.

Mrs. C. J. Barone and Mrs. H. J. Hammond will act as hostesses for the afternoon.

The Wayne County Medical Society, asssited by the Woman's Auxiliary to the Wayne County Medical Society, had a booth at the fifth Annual Child Health Institute, which was sponsored by the Detroit Council of Parent-Teacher Association in the auditorium of the J. L. Hudson Company. This exhibition was held from January 23 to January 28.

The Hygeia and Public Relations Committee endeavored to establish connection between the laity and the medical profession.

The program stressed the following: Prenatal Care of the Expectant Mother; Periodical Health Examinations for everybody with special reference to the adolescent period.

The Society had a booth at the Food Show February 18 and is planning to have one also at the Builders' show which will be held some time in March.

MRS. LESLIE T. HENDERSON, *Publicity Chairman.*

THE DOCTOR'S WIFE

The poets sing in early spring
Of the lover and his lass,
Of budding flowers, tinkling streams,
And verdant blades of grass.

It seems unkind that I cannot find
To save my humble life,
One simple lay to read today
About the doctor's wife.

Perhaps with me you will agree
When I say the doctor's spouse,
If she's like you she has more to do
Than just to mind her house.

She must smile all the while
Her dinner's cold as clay
And warm it up a dozen times
When he calls he's on his way.

She calms her fright when at night
He cures another's ills;
She must be sweet should she meet
One who spurns his bills.

The doc should read or go to seed,
The house is still as death
Children cannot laugh or play
And she 'most holds her breath.

She understands when he holds the hands
And pats a fevered cheek;
She does not blame the pretty dame
Or words of anger speak.

When far too late full many a date
The doctor's wife must shatter,
She must be gay and always say,
"No, dear, it doesn't matter."

There are knocks and bumps, ups and downs,
To be sure it's a merry life,
But answer me this, would you miss
Being YOUR doctor's wife?

FLORA WELLS MOON.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. E. I. Carr of Lansing, Chairman of the legislative committee, addressed the Bay County Medical Society at Bay City on January 25.

Dr. R. J. Hardstaff of Detroit possesses a rather unique degree. It is F.R.A.C.S., Fellow of the Royal Australian College of Surgery. Dr. Hardstaff is a graduate of the Toronto University Medical School. He is a native of Devonport, Tasmania, which is a portion of Australia. Dr. Hardstaff has made several visits to his native land since locating in Detroit.

Those who receive Hygeia, published by the American Medical Association, have been impressed with the artistic excellence of the publication, from the colored illustrations on the front page cover through and including the appropriate line and wash drawings that adorn its pages. These illustrations are to a large extent the work of Frances Gorsline Klan, the artist on the American Medical Association staff, who is a daughter of one of the members of the Michigan State Medical Society, Dr. C. S. Gorsline of Battle Creek, Michigan.

The third meeting of the newly formed Michigan Society of Roentgenologists met at the Hurley Hospital, Flint, on the evening of January 26. The speaker was Mr. Herbert Barbour, attorney for the medico-legal committee of the Michigan State Medical Society. Mr. Barbour spoke of the large factor of X-ray examinations and radiographs in the matter of prosecution and defense in malpractice cases.

The matter of construction of a veterans' administration hospital at Mt. Clemens came up for consideration at Washington on January 17. The project was turned down it was stated on account of the opposition of the American Association. The opposition of the American Medical Association, it is almost needless to repeat here, is based on a thorough knowledge of the needs of the veterans as well as a full realization of the condition of public finances.

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$10.00 and $15.00
Per Month

Stenographic, Telephone Switchboard, Elevators, Light, Heat and Janitor Service, included in Rental. All Conveniences. Inspection Invited.

No, these offices are not in Detroit, nor Grand Rapids, nor Flint. This is an ad culled from The Toronto Saturday Night.

OF INTEREST TO DERMATOLOGISTS

The following is a communication received by Dr. George H. Belote, Chairman of the Section on Dermatology and Syphilology of the Michigan State Medical Society, from Dr. Guy Lane of 416 Marlboro Street, Boston, Mass. Dr. Lane is Secretary of the American Board of Dermatology and Syphilology. This communication is here printed at the request of Dr. A. R. Woodburne, Secretary of the Section on Dermatology and Syphilology of the Michigan State Medical Society.

"The American Board of Dermatology and Syphilology desires your coöperation in announcing at your next meeting that the organization of the American Board of Dermatology and Syphilology has been completed and that the Board is prepared to act upon applications for certificates. This Board was authorized in June, 1932, by the American Dermatological Association and the Section on Dermatology and Syphilology of the American Medical Association. Its purpose is to determine standards of fitness for specialists in our field and to

issue a certificate of qualification to each physician complying with the requirements of the Board.

"At the present time the Board desires to receive applications only from those physicians who have limited their practice to this specialty for fifteen years or more, or physicians with a professional rank in Dermatology and Syphilology for five years in a Class A Medical School, or members of the American Dermatological Association. The Board has authorized the issuance of certificates without examination in the first two years to those physicians whose professional training, attainments and prestige entitle them, in the opinion of the Board, to such a certificate. The Board desires to act upon such applications before applications for certificates in other groups are considered.

"Examinations for the other groups will be held in the fall of 1933. Applications for this examination are not desired now, but will be requested later. Due notice of these examinations will be published in the Archives and the Journal of the American Medical Association. Further information and application blanks may be obtained from the secretary."

NORTHERN TRI-STATE MEDICAL ASSOCIATION

The following is the program of the Northern Tri-State Medical Association, to be held at La Porte, Indiana, April 11, 1933.

MORNING SESSION—Civic Auditorium

8:30 A. M.—Fracture Symposium: Paul B. Magnuson, M.D., Prof. Surgery, Northwestern Univ., Chicago, Ill.; Harry E. Mock, M.D., Assoc. Prof. Surg., Northwestern Univ., Chicago, Ill.; R. W. McNealy, M.D., Assoc. Prof. Surg., Northwestern Univ., Chicago, Ill.

9:30 A. M.—Diseases of Parathyroid with Special Reference to Parathyroid Overfunction: Russell M. Wilder, M.D., Mayo Clinic, Rochester, Minn.

10:15 A. M.—Some Diagnostic Points Differentiating Abdominal and Genito-Urinary Diseases: E. Benj. Gillette, M.D., Gillette Clinic, Toledo, Ohio.

11:00 A. M.—The Control of Chronic Intractable Asthma with Pollen: George L. Waldbott, M.D., Detroit, Michigan.

11:45 A. M.—Early Clinical Diagnosis of Diseases of the Mammary Gland: Arthur E. Hertzler, M.D., Prof. Surgery, Univ. Kansas, Kansas City, Mo.

12:30–1:15 P. M.—Luncheon, Civic Auditorium

AFTERNOON SESSION—Civic Auditorium

1:15 P. M.—Other Uses of Digitalis than in the Treatment of Cardiac Decompensation: Henry A. Christian, M.D., Prof. Medicine, Harvard Medical College, Boston, Mass.

2:00 P. M.—Acute Appendicitis with Special Reference to the Delayed Treatment of Advanced Cases: Frederick A. Coller, M.D., Prof. Surgery, Univ. Michigan, Ann Arbor, Mich.

2:45 P. M.—The Management of Hepatic Disease; Charles A. Elliott, M.D., Prof. Medicine, Northwestern Univ., Chicago, Ill.

3:30 P. M.—Headache: Charles Lukens, M.D., Toledo, Ohio.

4:15 P. M.—Newer Methods for the Relief of Prostatic Obstruction: Reed M. Nesbit, M.D., Asst. Prof. Surg., Univ. Michigan, Ann Arbor, Mich.

5:00 P. M.—Acute Vascular Accidents: Plinn F. Morse, M.D., Harper Hospital, Detroit, Michigan.

EVENING SESSION—Hotel Rumely

6:30 P. M.—BANQUET

Address: Neuropsychoses from the Internist's Point of View: Chas. P. Emerson, M.D., Prof. Medicine, Indiana Univ., Indianapolis, Ind.

THE DOCTORS' LIBRARY

THE 1932 YEAR BOOK OF RADIOLOGY. DIAGNOSIS. Edited by Charles A. Waters, M.D., Associate in Roentgenology, Johns Hopkins University; Assistant Visiting Roentgenologist, Johns Hopkins Hospital. Therapeutics. Edited by Ira I. Kaplan, B.Sc., M.D., Director, Division of Cancer, Department of Hospitals, City of New York; Visiting Radiation Therapist, Bellevue Hospital; Director, New York City and Brooklyn Cancer Institutes; Assistant Radium Therapist, Lenox Hill Hospital; Clinical Professor of Surgery, New York University and Bellevue Medical College. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago. Price $6.00. 750 pages.

This is a book for the physician who is either a specialist in roentgenology or whose major interest is in this field. It is in no sense an elementary textbook. In it are discussed all the recent developments in both radiography and radiotherapy, that is X-ray therapy. Perhaps no more competent and discriminating authors could have been found to review and to digest the vast volume of current literature on these two phases of radiology. Dr. Waters discusses the subject of diagnosis as applied to the various systems of the body. Part I includes also chapters on technic, medico-legal and teaching and instruction in the subject of radiography. Dr. Kaplan, in approximately half the volume, discusses the treatment of malignancy as it is apt to occur regionally. We have also chapters on Radiation Biology, The Physics of Radiation, Grenz Ray Therapy, Protracted Radiation Therapy, Cancer Cures, and, perhaps most important, Injuries in Radiation Therapy. We have insisted one cannot be too well prepared or too competent in the practice of either X-ray therapy or diagnosis. We, therefore, welcome a work of such outstanding merit as this. It is also a splendid sample of the bookmakers' art, printed in clear easily readable type, well illustrated and well indexed. It should be a desk handbook of every roentgenologist.

LONGEVITY AFTER CORONARY THROMBOSIS

To illustrate the longevity and physical activity possible after acute coronary occlusion, PAUL D. WHITE, Boston, presents the case of a man who died of apoplexy at the age of 80 and showed at necropsy a firm scar in the heart muscle resulting from the healing of an infarct which occurred seventeen and one-half years before. The heart was otherwise in good condition anatomically and so sound functionally that ten years after the heart attack the patient was able to climb a mountain at fast pace without symptoms, at the age of 73 years. The three points of special interest and importance in the case are (1) the patient's longevity, for he survived the acute coronary thrombosis by seventeen and one-half years and lived to the ripe old age of 80 years in spite of it; (2) that when the patient did finally die, his death was not due to heart disease (but to cerebral hemorrhage), and (3) that for many years after the coronary thrombosis the patient was much more strenuous physically than the great majority of men of his age who have no heart trouble at all, and even when he approached his eighteenth year he was able to walk 5 miles a day without trouble if he did not hurry or climb hills. This is a case which may serve not only to demonstrate the wonderfully recuperative power of a seriously injured heart muscle, but also to put hope into the breasts of the many victims of conorary thrombosis, who, having recovered from their acute attacks, still live in dread, waiting for the sword of Damocles to fall in the shape of a second and fatal attack.—*Journal A. M. A.*

The Secretary of the Society will please notify the State Secretary immediately of any errors or change in these offices.

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